

## Critical Areas Study

### Evergreen Ford Lincoln - New Dealership Project Issaquah, Washington

## Critical Areas Study

### Revision 01

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### Revision History

| Revision Number | Revision Date | Description of Changes   |
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| 00              | April 8, 2019 | Initial Submittal  |
| 01              | May 16, 2019  | Response to Development Commission comments; included a Stream Delineation Study |
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## 1.0 INTRODUCTION

This Critical Areas Study (CAS) has been developed in support of the Lincoln Ford Dealership Project (Project) located in the City of Issaquah, Washington. The applicant proposes developing a currently vacant piece of land into a new automobile dealership northeast of Front Street and Interstate 90. This document is intended to complement a permit-level submittal package to be submitted to the City of Issaquah for review. This plan references the 30 percent Landscape Design Drawing Set submitted concurrently with this CAS and attached as Appendix A.

North Fork of Issaquah Creek and another small, unnamed tributary to Issaquah Creek flow through the northwestern and the southwestern edges of the project site. This CAS will outline a plan to modify, through reduction with enhancement, the standard buffer of the North Fork of Issaquah Creek. It will show that not only will this modification accommodate the Project, it will also provide a higher level of protection to the North Fork of Issaquah Creek. This CAS has been prepared in accordance with Issaquah Municipal Code (IMC) Chapter 18.10.410 – Critical Area Studies and meets the requirements of IMC Sections 18.10.770 through 18.10.795, which discuss streams and their associated buffers.

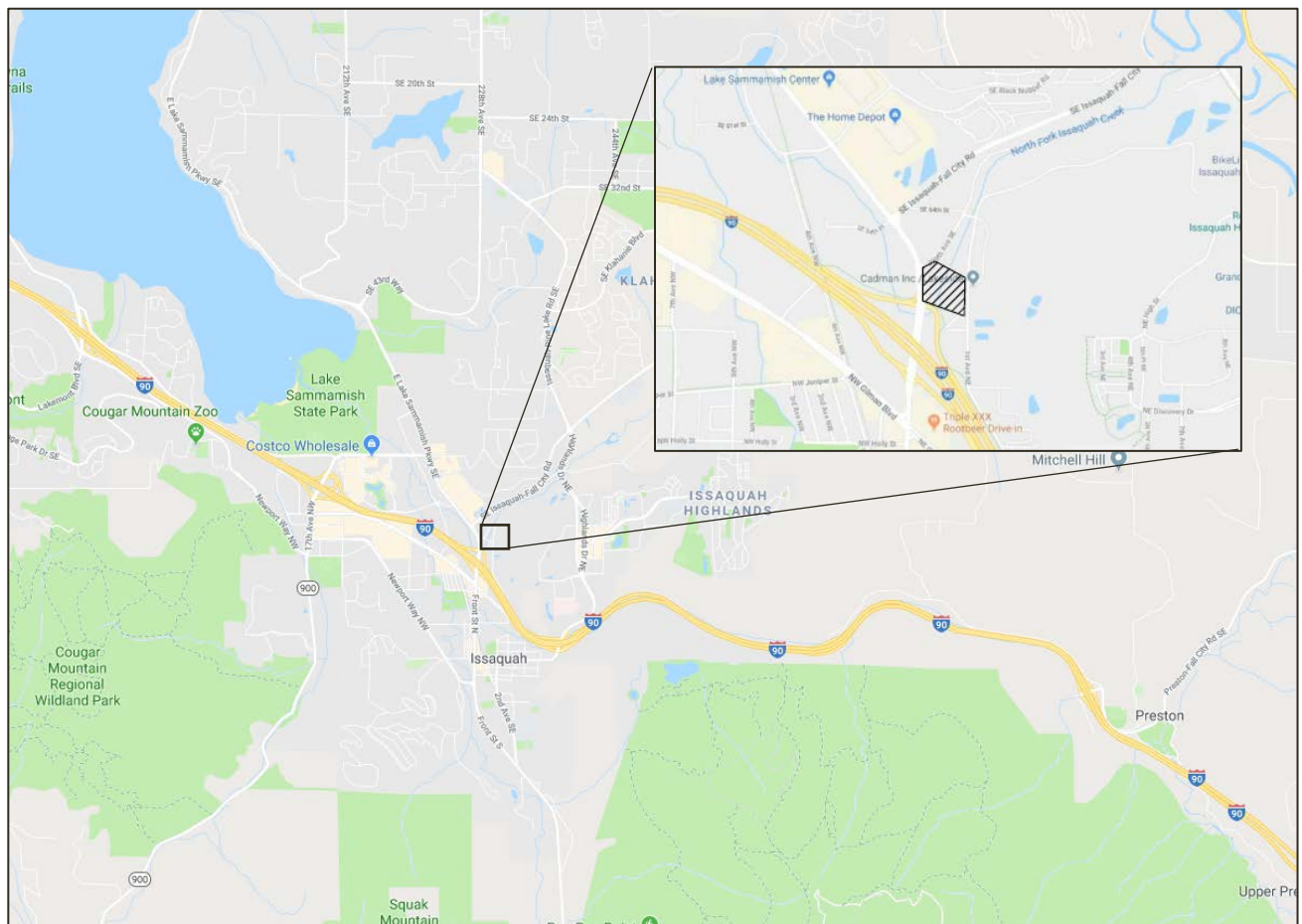


Figure 1 - Vicinity Map and inset illustrating the location of the proposed Project. Source Google Map, 2019.

## 2.0 PROJECT LOCATION

The project is located north of I-90, south of the Lake Sammamish Center in the City of Issaquah (Figure 1). The applicant proposes development on two parcels: a 0.5-acre parcel located at 6721 230th Avenue SE (King County Parcel Number 2724069084), and a 3.45-acre parcel located at 22909 SE 66th Street (King County Parcel Number 2724069086). Portions of five roadways and their associated rights-of-way define the edges of the project area; to the west and east are East Lake Sammamish Parkway SE and 230th Avenue SE. The north end of the project site is delineated by the edges of SE 66th Street and 229th Avenue, while SE 66 Place and the I-90 off-ramp and Issaquah Preston Trail border along the south.

## 3.0 BASELINE CONDITIONS

### 3.1 Landscape Setting

The subject parcels are primarily surrounded by mixed use, commercial business and residential areas; green space, and industrial land uses (Figure 2). A cement supplier, Cadman Inc./Lakeman, is located east of 230<sup>th</sup> Avenue SE. A wetland complex is west of East Lake Sammamish Parkway SE. Directly north and south of the project area, extensive commercial business districts and residential areas are present.

### 3.2 Existing Vegetation

The subject parcels are predominately open grassy field with a mix of mostly tall deciduous trees growing in groups along the parcel boundaries. A tall mixed grove of trees and shrub vegetation, consisting of Lombardy Poplar (*Populus nigra*), Douglas-fir (*Pseudotsuga menziesii*), and Scot's Pine (*Pinus sylvestris*) forms a row near SE 66<sup>th</sup> Street and 230<sup>th</sup> Avenue SE. Black Cottonwood trees flank SE 66<sup>th</sup> Place at the south end of the project, and also form a small clump just west of the dilapidated structure still remaining in the west half of the site. A few satellite trees, such as an exceptionally large Silver Maple (*Acer saccharinum*) and a Deodar Cedar (*Cedrus deodara*), are rooted near the northern boundary. The Tree Removal and Retention Plan, submitted under a separate cover, contains more information on existing trees.

Native trees shrubs and groundcover plants were installed for WSDOT's culvert replacement and stream realignment project. Salmonberry (*Rubus spectabilis*), Osoberry (*Oemleria cerasiformis*), Black Cottonwood, native willow (*Salix spp.*), and Western red cedar (*Thuja plicata*) were installed above the OHMW of both the North Fork of Issaquah Creek and the small tributary to the North Fork of Issaquah Creek. Some of the mitigation plantings are in the WSDOT ROW; some are located on the subject parcels.

### 3.3 Critical Areas

Two tributaries to Issaquah Creek flow through the project site, the North Fork of Issaquah Creek and an unnamed tributary to the North Fork (Figure 2). These features are shown on the Stream Delineation Figure (Appendix A - ) and the Landscape Drawings, attached to this report in Appendix B. The North Fork of Issaquah Creek flows from generally east to west, generally following the northern edge of the parcel

boundary before entering WSDOT right-of-way (ROW) and flowing under East Lake Sammamish Parkway SE through a newly installed fish-passable box culvert.

The Washington State Department of Transportation (WSDOT) realigned the North Fork of Issaquah Creek and the small tributary through the subject property as part of a fish passage/culvert replacement and habitat improvement project completed in October of 2017. The box culvert and creek bed restoration created new habitat on the subject parcel, and reintroduced an additional mile of habitat upstream of the site on the North Fork to native and migratory fish (Washington State Department of Transportation, 2017) (Figure 4). See Section 3.5 below for more information on the Stream Delineation Study.

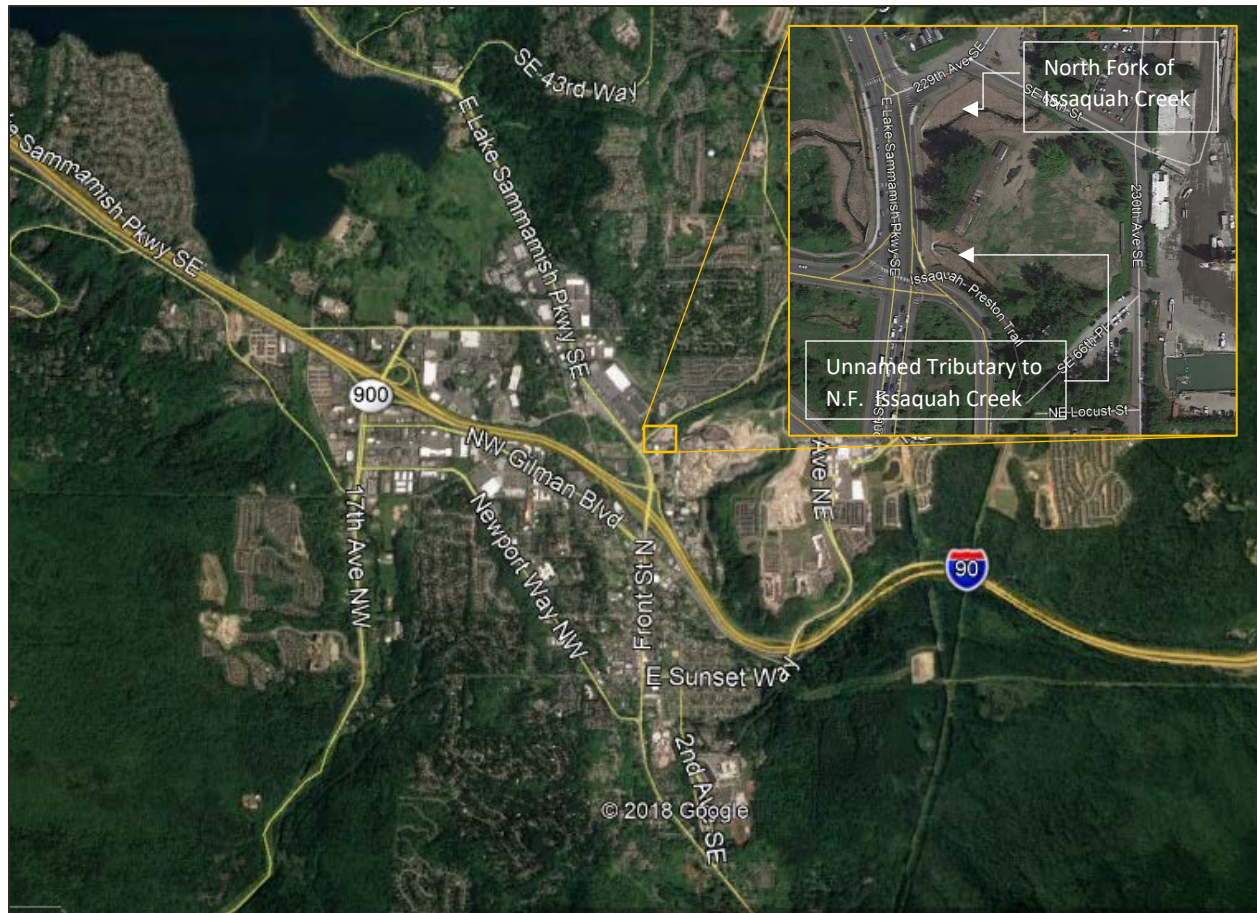


Figure 2 - Vicinity map and inset illustrating position of streams near the project site. Source Google Map, 2019.

### 3.4 Hydrology

The North Fork of Issaquah Creek is located in the Lake Washington/Cedar/Sammamish Watershed (WRIA 8) and the Issaquah Creek Basin. A tributary to the Issaquah Creek mainstem, the headwaters of the North Fork originate in the dense residential areas of Issaquah Highlands and Klahanie (Kerwin, 2001). After meeting with the Issaquah Creek mainstem just downstream of the project site, the North Fork outfalls into Lake Sammamish. Groundwater from wetland seeps and direct rainfall provide the primary source of water to the Creek (Kerwin, 2001).



### 3.5 Stream Delineation Study

This Critical Area Study contains the results of OSG's Stream Delineation Study performed on-site in April of 2019. The purpose of the study was to evaluate on-site conditions and flag the location of the North Fork of Issaquah Creek's ordinary high-water mark. This study focuses on the North Fork of Issaquah Creek. A small tributary is located off-site in the WSDOT ROW; as such, the small unnamed tributary was not surveyed under this study. Geometry for the stream is approximated in the attached documentation.

#### 3.5.1 Methods

Public domain information on the subject properties was reviewed for this stream delineation study. These sources include Washington State Department of Fish and Wildlife interactive mapping programs (PHS on the Web and Salmon Scape) and Washington State Department of Ecology's Water Quality Atlas interactive mapping tool.

Ordinary High Water Mark (OHWM) determination followed methodology outlined in the Department of Ecology's *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (Anderson, Meyer, Olson, & Stockdale, 2016) and the Corps Regulatory Guidance Letter no. 05-05, *Determining OHMW in Streams in Washington State* (Stockdale, 2008).

The OHWM was flagged on both sides of the North Fork of Issaquah Creek with blue and white striped (stream delineation) flagging tape. To determine OHMW, the bed and bank was analyzed for signs of bank erosion and channel scour, sorted sediment, flood or over bank deposits, watermarks and wrack accumulation. Areas meeting these indicators for ordinary high water flow were determined to be within the OHMW edge (Figure 6). (Figure 5).

The regulatory status of streams was determined by reviewing Issaquah Municipal code (IMC) in May of 2019. Relevant data was gathered from Title 18, *Environmental Protection*, for the purpose of evaluating this proposal.

#### 3.5.2 Findings

Approximately 295 linear feet (LF) of the North Fork of Issaquah Creek was delineated on April 26, 2019. The right bank of the creek was delineated with 20 flags; the left bank is defined by 23 flags. The presence of scour marks, sorted cobble, presence or absence of deciduous leaves, and wracked debris was used to locate the flags of the OHWM edge along the Creek.

As stated, the North Fork of Issaquah Creek was recently relocated and restored under a WSDOT project intended to repair a non-conforming culvert. The Creek now flows beneath the Parkway through a large, concrete box culvert with a rounded cobble substrate providing fish-friendly habitat beneath the road. The on-site portion of the creek, also engineered and constructed under the WSDOT project to provide fish habitat, is approximately 18 feet wide from OHWM to OHWM, and exhibits pools, riffles and partially buried large woody debris typically found in non-impacted Puget-lowland streams.

The North fork of Issaquah Creek is mapped as a priority area for Coho (*Oncorhynchus kisutch*), Fall chinook (*Oncorhynchus tshawytscha*), Resident coastal cutthroat (*Oncorhynchus clarki*), Sockeye salmon (*Oncorhynchus nerka*) and Steelhead trout (*Oncorhynchus mykiss*). During stream delineation, juvenile

1 fish identified as Coho, were observed just downstream of the project near the new box culvert. As no  
2 barriers are present, they are presumed to also inhabit the on-site portion of the stream at certain times.  
3 The North Fork of Issaquah Creek is a perennial fish bearing stream.

4 An unnamed tributary to the North Fork of Issaquah Creek is located off-site to the southwest of the  
5 project site in the WSDOT ROW. As stated, this stream was not surveyed as part of this study. Approximate  
6 geometry is presented in the attached documents.

### 7 **3.5.3 Stream Type**

8 Streams are classified into four distinct types according to Section 18.10.780 of the Issaquah Municipal  
9 Code. Classification is based on whether the stream is large enough to be classified a water of the state,  
10 whether it is perennial or seasonal, and/or whether it contains salmonids in any part of the year.

11 Issaquah Creek, a perennial stream with salmonids, is classified as a Class 2 Stream with Salmonids.

12 The standard buffer for Class 2 Streams with Salmonids is 100 feet.



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## 4.0 SITE PHOTOS



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Figure 3 - Overview photo showing the interior of the subject parcels. Photo taken facing southwest. (Photo from 4/2/19)



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- 1 Figure 4 - WSDOT Fish Passage Improvement Project. Western red cedar, Osoberry and willow species are visible in background.
- 2 Photo taken facing East. (Photo from 4/2/19)



- 3
- 4 Figure 5 – Photo illustrating hung stream delineation flagging tape on the North Fork of Issaquah Creek (Photo 4/26/19).



- 5



- 1 Figure 6 – Proposed mitigation for the project will be in an area that is currently compacted bare ground, low grass and non-  
2 native weed species. Photo taken facing west. (Photo 4/2/19).



- 3  
4 Figure 7 – Another view of the degraded buffer that will be enhanced through a combination of grading, soil improvement.  
5 Photo taken facing east. (Photo 4/2/2019)



## 5.0 PROPOSED PROJECT DEVELOPMENT

### 5.1 Project Description

The applicant proposes construction of a Ford Lincoln Dealership within the developable site area. The development will include ingress/egress from SE 66<sup>th</sup> Street, a large parking and display area typical of a commercial car dealership, landscaping that conforms to the IMC requirements, and a building for showroom, offices and automobile maintenance. Issaquah also requires frontage improvements including sidewalk and landscape improvements along SE 66<sup>th</sup> Street and 229<sup>th</sup> Ave SE near the subject Critical Areas. A total of 139,186 square feet (SF) will be converted from existing conditions to the above-described elements.

To achieve this proposed building envelope, the applicant requests a reduction in the on-site portion of the North Fork of Issaquah Creek standard buffer from 100 feet to 75 feet. This is a full 25 percent reduction conditionally allowed as an administrative action under Issaquah's critical area regulations for stream buffers (IMC 18.10.790). Buffer averaging was considered to satisfy the project, but ultimately, due to the lack of space in the project area, virtually no area was available for buffer expansion on the subject parcel. Buffer reduction, furthermore, is the option that will allow the applicant to enhance degraded buffer, adding more protection to the on-site resource.

The following Sections will show how the Project satisfies the criteria outlined in the code and meet the intent of Issaquah's Critical Area Regulations by repairing a degraded buffer and enhancing with a mix of native plants. Section 7.0 details the elements of the mitigation plan proposed by the applicant.

The proposed mitigation plan is to conduct limited grading in the buffer to improve flood flow storage capacity, to amend soil with compost, to remove an existing shed from the reduced buffer area, to install a diverse mix of native woody and herbaceous plants, to place large woody debris, to in-fill plant WSDOT ROW and planting areas with native groundcover, to apply a mulch layer to suppress weeds and retain soil moisture in the new planting area, and to install a temporary irrigation system capable of delivering at least one inch of water to all dry buffer areas. The site will be maintained and monitored for a period of five years, consistent with the IMC.

### 5.2 Code Analysis

Issaquah Municipal Code Section 18.10.790(D.) outlines the criteria to be satisfied in order for Issaquah to grant a buffer reduction. No more than a 25 percent reduction is allowed under the provision. This proposal relies on improving a currently degraded buffer through Stream Buffer Reduction with Buffer Vegetation Enhancement per IMC Section 18.10.790(D.)(4.). The applicant will also remove a shed and existing kennel building from portions of the standard buffer. The following is an excerpt from this IMC Section (text bolded and italicized), with a description of how the site conditions and the proposal meet the criteria.

#### ***4. Stream Buffer Reduction with Buffer Vegetation Enhancement:***

***a. Purpose: The standard stream buffer widths identified in IMC 18.10.785(C) may be reduced when enhancement of the existing stream buffer vegetation would demonstratively improve water quality and habitat functions.***

Currently, the on-site buffer slated for enhancement under this plan consists of compacted earth covered with a thin layer of mowed grass and herbs. This condition provides little to no water quality and habitat function. The proposal as described below and in the mitigation plan drawings will add a diverse mix of groundcover, shrub and tree species to the area. Adjacent new impervious surfaces will be sloped away from the critical area so that stormwater can be treated before discharge. Large woody debris will be added to the enhancement. Overall, the proposal will lift water quality and habitat function of the North Fork buffer.

***b. Applicability – Qualifying Stream Buffers: A stream buffer may qualify for a buffer reduction under this section when:***

***(1) The stream buffer proposed to be enhanced/reduced meets all of the following characteristics:***

***(A) More than forty (40) percent of the buffer area is covered by nonnative and/or invasive plant species; or***

***(B) Tree and/or shrub vegetation cover less than twenty-five (25) percent of the buffer area; and***

***(C) The stream buffer has slopes of less than twenty-five (25) percent.***

The existing stream buffer has very little cover. Most of the buffer is composed of compacted earth with low grass and weeds in general, it is estimated that the buffer currently exhibits less than five percent aerial coverage of native tree and shrub vegetation. This condition meets subsection (B) above. The stream buffer has an average slope of between 5 and 10 percent as visually estimated during a site visit, meeting criteria (C).

***(2) The proposed development incorporates performance standards to minimize the impacts of the proposed land use, consistent with IMC 18.10.660.***

Performance standards are listed below in Section 8.1.3. The standards from the cited section are incorporated into the design.

***c. Critical Area Study Required: A critical area study consistent with the requirements of IMC 18.10.410(C) and the following provisions is required in order to evaluate and approve a reduction of the standard buffer width. The critical area study shall:***

This CAS fulfills this requirement.

***(1) Evaluate the water quality, habitat, groundwater recharge, stormwater detention, and erosion protection functions of the stream buffer;***

The existing stream buffer is degraded, as shown in the site photographs and narrative above. The thin grass provides little erosion protection during rain events and has little rigid vegetation that could slow

stormwater during rain events. Water quality function is low as stormwater likely runs off the site. Recharge is only greatest when water is held near the surface, a service provided by non-compacted soils rich in organic matter; this is not the current condition. Habitat function provided by the low grass is also low.

**(2) Document whether or not the:**

**(A) Stream buffer under consideration meets the criteria established in subsection (D)(4)(b) of this section and qualifies for consideration of a buffer reduction under this section;**

The buffer meets the criteria established in subsection (D)(4)(b.), as described under the excerpted Section above.

**(B) Buffer reduction would adversely affect the functions and values of the adjacent stream; and**

The reduced portion of the buffer does not currently provide important function for the North Fork as it is compacted earth with low grass and herbs. Water quality, flood flow attenuation and habitat function of the proposed reduced area is negligible. The proposed condition will provide a functional lift despite the reduction.

**(C) Ecological structure and function of the reduced buffer after planting enhancement would improve water quality and habitat functions.**

As stated above, the proposal will improve water quality and habitat function over current conditions by converting a compacted grass field into a structurally diverse mix of native groundcover, shrubs and trees. Large woody debris will be added to increase habitat function. Stormwater that hits adjacent parking areas will be routed away from the buffer and treated prior to being released to the environment. Emergent vegetation near the creek will help trap sediment carried in stormwater flows.

**(3) Propose a stream buffer enhancement plan including:**

**(A) Removal of all invasive, nonnative vegetation; and**

All invasive and non-native vegetation will be removed from the enhancement area prior to planting. The monitoring and maintenance plan outlines protocol to keep weed cover low throughout the monitoring and maintenance plan.

**(B) Planting of appropriate native tree and shrub species at a minimum planting density of ten (10) feet on center for trees and five (5) feet on center for shrubs; and**

Trees are proposed at 10-foot on-center spacing; shrubs at 5-foot on-center.

**(C) A monitoring and maintenance plan for the enhanced buffer for a five (5) year period, consistent with IMC 18.10.760 and 18.10.810.**

See Sections 8.6 (Maintenance) and 8.7 (Monitoring) for the respective plans. This stage of the project will be in effect for a period of five years.

**5. Stream Buffer Reduction with Removal of Impervious Surface Area**

**a. Purpose: The standard stream buffer area may be reduced at a 1:1 ratio with the removal of existing, legally non-conforming impervious surface area located within the stream buffer area.**

The onsite existing structure, a dilapidated former dog kennel, is located partially within the standard critical area buffer associated with the North Fork of Issaquah Creek. The structure will be demolished and removed from the buffer. The small associated shed is partially within the reduced buffer and it will also be demolished.

**1) The removed impervious area shall be located closer toward the stream than proposed buffer reduction.**

The removed shed is closer to the stream than the proposed buffer reduction.

## 6.0 MITIGATION SEQUENCING

The project follows guidelines for mitigation sequencing (avoidance, minimization, rectifying impact, compensation, and monitoring) outlined in Section 18.10.490 of the IMC. These criteria were sequentially applied to the proposed project to guide its design with the goal of minimizing the amount of buffer reduction. The following section discusses how the proposal follows the sequencing steps detailed in the IMC.

### 6.1 Avoid

The project was designed to utilize the flat portion of the subject parcel, away from the on-site critical areas and associated buffers (as much as possible). No direct impacts to critical areas are proposed. Stormwater will be directed away from the critical area buffer and treated prior to being released. Ingress/egress will be from SE 66<sup>th</sup> Street, rather than from a more desirable location off East Lake Sammamish Parkway SE, which would require crossing through inner portions of critical area buffers. Although the design was altered to avoid impacts to the on-site critical area buffer, total avoidance was unachievable due to the nature of the economic development.

### 6.2 Minimize

Project elements were designed to minimize the impact to critical areas and buffers. During construction, Temporary Erosion and Sediment Control (TESC) Best Management Practices (BMPs) will be in place to protect critical area and critical area buffers from site clearing and from construction-impacted water. The proposed project is limited to impacting only the outer 25 percent of the critical area buffer, in areas that are not currently functioning highly.

### 6.3 Rectify

The mitigation plan outlined in Section 7.0, below, details how this proposal will repair and restore the remaining reduced buffer. The proposed condition will provide a higher level of protection to on-site and downstream resources than the current condition. A diverse mix of plants will help shade the stream and provide habitat function to birds and small mammals using the riparian corridor, and stormwater infrastructure employed in the adjacent parking areas will push stormwater away from the buffer to be treated.

### 6.4 Compensate

See the previous section. A diverse mix of native emergent and woody plants, plus installation of large woody debris will help this critical area buffer provide a function lift for the North Fork of Issaquah Creek and its buffer compared to existing conditions.

### 6.5 Monitor

The site will be monitored and maintained for a period of at least five years per requirements of the IMC. The maintenance and monitoring plans are outlined in Sections 8.6 and 8.7.

## 7.0 FUNCTIONAL LIFT ANALYSIS

The following is an analysis of functions provided by the current and proposed condition and whether this plan represents a functional lift:

### 7.1 Water Quality

**Existing Condition** - Lack of vegetation near creek raises water temperatures, negatively affecting spawning for salmonids and migratory fish. Vegetation in the buffer is mostly grass, lacks the structural diversity required to trap sediments and associated pollutants from surface runoff. Function is low.

**Proposed Condition** - More vegetation in stream buffer will contribute shade to decrease water temperatures, improving spawning habitat for salmonids and migratory fish. Installation of diverse native vegetation and varying plant structures will slow water velocity during floods while trapping sediments and associated pollutants from surface runoff.

**Summary** – The Water quality function is lifted under the proposal.

### 7.2 Hydrologic Function

**Existing Condition** - An area of low elevation adjacent to creek that can store water during overbank flooding is not present. Lack of floodwater storage limits groundwater recharge. Lack of vegetation in reduced buffer zone increases the probability of high-water velocities and damage during periods of overbank flooding.

**Proposed Condition** – Grading in the floodplain increase floodwater storage. Diverse native vegetation and varying plant structures installed in the reduced buffer will slow water velocity, minimizing peak flows

and thus reducing maximum flows. Attenuates potential damage to public and private entities downstream.

**Summary** – The addition of flood storage and installation of native plants will increase the hydrologic function of the site.

### 7.3 Habitat Function

**Existing Condition** - Vegetation is mowed grass, providing little to no habitat for small mammals and birds. No habitat structures such as LWD.

**Proposed Condition** – Addition of a diverse array of native plants, including seed- and nut-producing plants, will attract birds and wildlife to the buffer. Large woody debris will create habitat for insects, amphibians, birds and small mammals.

**Summary** – the mitigation plan will create a diverse and structurally-complex area where there is currently only grass.

### 7.4 Overall Condition of the Buffer

The reduced critical area buffer condition is degraded and low performing. The proposal would increase all three functions discussed in this Section.

## 8.0 MITIGATION PLAN

A total of 19,570 SF of buffer adjacent to the North Fork of Issaquah Creek, on the south side, will be enhanced with a mix of native groundcover, shrub and tree species typical of the region. A subset of this area will be graded prior to planting to improve flood storage function on-site; see the grading plan shown in Appendix B.

The WSDOT planting areas both inside of the subject parcel assemblage and within the WSDOT ROW will be improved under this plan. Although these WSDOT planting areas currently exhibit a mix of installed native plants that are currently in good condition with low mortality, the applicant is providing understory groundcover plantings to improve the structural and species diversity in the existing mitigation site. The mitigation areas established under the WSDOT habitat improvement project will be underplanted with a mix of native groundcover, including lady fern, salal, creeping mahonia and swordfern. Hundreds of groundcover plants will bolster the WSDOT planting areas throughout and adjacent to the project area. See Appendix B for more detail.

The proposed enhancement planting plan along with a planting schedule is shown in the attached mitigation plan drawings, prepared by SCJ Studio. Table 1, below, shows the plantings proposed under this mitigation plan.

Table 1 - Plant schedule for the buffer enhancement area.

| Common Name            | Scientific Name              | Quantity Proposed |
|------------------------|------------------------------|-------------------|
| Red alder              | <i>Alnus rubra</i>           | 55                |
| Bitter Cherry          | <i>Prunus emarginata</i>     | 55                |
| Western Red Cedar      | <i>Thuja plicata</i>         | 107               |
| Common lady fern       | <i>Athyrium felix-femina</i> | 46                |
| Salal                  | <i>Gaultheria shallon</i>    | 367               |
| Creeping mahonia       | <i>Mahonia repens</i>        | 423               |
| Pacific ninebark       | <i>Physocarpus capitatus</i> | 101               |
| Red flowering currant  | <i>Ribes sanguineum</i>      | 64                |
| Nootka rose            | <i>Rosa nutkana</i>          | 146               |
| Common white snowberry | <i>Symphoricarpos albus</i>  | 119               |
| Evergreen huckleberry  | <i>Vaccinium ovatum</i>      | 94                |
| <b>TOTAL PLANTS</b>    |                              | <b>1,577</b>      |

The planting plan consists of establishing three native tree species seven native shrub species and one emergent species. All installed plant species are endemic to the Pacific Northwest and have proven to be successful in the Puget Sound lowland ecoregion and in mitigation planting areas. Red alder, butter cherry and Western red cedar will be focused in a large swath in the middle of the buffer enhancement area. Both tree species are well-suited to periods of inundation and tolerate wet sites. A mix of prickly and thicket-forming shrubs such as Nootka rose (*Rosa Nutkana*), Pacific ninebark (*Physocarpus capitatus*) and snowberry (*Symphoricarpos albus*) will flank each side of the tree planting area to act as a barrier to humans and pets, meeting one of the IMC performance standards. Lady fern, the emergent species, will be planted along the side of the stream.

Several other plant species included in the planting plan will provide food sources and structural diversity, Evergreen huckleberry and salmonberry, for instance. A wide variety of plant species were chosen to mitigate any possible failure of one or more taxa. The sections on Performance Standards, Reporting, and the Contingency Plan discuss this possibility and are located in Sections 7.7, 7.8 and 7.9.

Large woody debris (LWD) will be placed in the enhanced critical area buffer. A total of four pieces of LWD that meets the definition of LWD, below, will be placed in the mitigation area. Only native species will be used, and no tree that is covered in ivy shall be left on-site. The salvaged wood will be at least 20 feet in length and with a diameter of at least 12 inches at the small. Root balls can be attached provided the soil



attached to the ball does not contain noxious weeds. Woody debris is limited to four pieces in order to provide enough space for plant installation. The addition of wood debris will increase structural complexity and habitat function by providing refuge for birds and small mammals.

Overall, this proposal exceeds the requirements of the IMC. The actions proposed here will provide a functional lift to the North Fork of Issaquah Creek and other aquatic areas nearby compared to a scenario where the project is not implemented.

## **8.1 Mitigation Goal, Objectives, and Performance Standards**

The goal and objectives for the proposed mitigation actions are based on the presence priority fish species in the North Fork of Issaquah Creek, and the 303d listing for temperature. The mitigation plan aims to enhance the newly-proposed critical area buffer in such a way that the enhancements rectify any protective and functionality losses from the buffer reduction.

### **8.1.1 Goal**

Improve critical area functions and buffer protection as a result of the proposed Project.

### **8.1.2 Objectives**

- 1 Establish a diverse mix of native groundcover, shrub and tree species adjacent to the North Fork of Issaquah Creek.
- 2 Control invasive weed species.
- 3 Install large woody debris.
- 4 Monitor and maintain the site for a period of at least five years.

### **8.1.3 Performance Standards**

These performance standards shall be used to ensure the objectives are met and to measure the success of the mitigation site over time. If performance standards are met at the end of Year 5, the site shall be deemed successful. If performance standards are not met, contingency actions shall be implemented to correct any deficiency.

#### **1. Native Cover:** In all areas, the following standards shall apply:

- a) Achieve 30 percent cover of native woody vegetation by the end of Year 2.
- b) Achieve 50 percent cover of native woody vegetation by the end of Year 3.
- c) Achieve 60 percent cover of native woody vegetation by the end of Year 4.
- d) Achieve 80 percent cover of native woody vegetation by the end of Year 5.

Native volunteer species can count towards the overall coverage.

#### **2. Plant Survival:** Survival of woody-stemmed mitigation plantings will be 100 percent (achievable through survival or replanting) at the end Year 1. If one species exhibit widespread mortality, consider replacing with another species better suited for the conditions. Plant survival will not be tracked in Years 2 through 5.

#### **3. Species Diversity:** Maintain at least three tree species, four shrub species and one emergent species throughout the maintenance and monitoring period. Volunteer species can count towards this diversity requirement provided they are native.



4. **Invasive Cover:** No more than 10 percent total aerial cover during any growing season during the maintenance and monitoring period will be allowed. Corrective action described in the Maintenance Section will be implemented if this threshold is surpassed at any time. Invasive weeds to be controlled include (but are not limited to) the following:

- Himalayan blackberry (*Rubus armeniacus*)
- cut leaf blackberry (*Rubus laciniatus*)
- Scotch broom (*Cytisus scoparius*)
- cherry laurel (*Prunus laurocerasus*)
- English holly (*Ilex aquifolium*)
- English ivy (*Hedera helix*)
- reed canarygrass (*Phalaris arundinacea*)
- knotweed species (*Polygonum spp.*)
- tansy ragwort (*Senecio jacobaea*)
- giant hogweed (*Heracleum mantegazzianum*)
- other noxious weed of concern as identified by the King Count Noxious Weed Board.

5. **LWD:** Four pieces of Large Woody Debris will be maintained in the mitigation site for the five-year maintenance and monitoring period.

The IMC outlines the following list of performance standards applicable to the design of the mitigation plan and final condition of the proposed development. These design requirements will be incorporated into the final design of the dealership. A dense mix of shrubs is proposed along the edge of the lot to prevent people from entering the buffer area.

- A. Lights shall be directed away from the wetland. Lighting levels shall meet the outdoor lighting standards for spillover into critical areas, per IMC 18.07.107.
- B. Activities that generate noise shall be located away from the wetland, or noise impacts shall be minimized through design or insulation techniques.
- C. Toxic runoff from new impervious surface area shall be directed away from wetlands.
- D. Treated stormwater runoff may be allowed into wetland buffers. Channelized flow should be prevented.
- E. Use of pesticides, insecticides and fertilizers within one hundred fifty (150) feet of wetland boundary shall be limited and follow best management practices (BMPs).
- F. The outer edge of the wetland buffer shall be planted with dense vegetation and/or fencing to limit pet and human disturbance. (Ord. 2455 § 10, 2006; Ord. 2301 § 3, 2001; Ord. 2108 § 10.2.27.11, 1996).

## 8.2 Material Definitions

1. **Irrigation system:** Temporary irrigation system consisting of either a watering truck or temporary above-ground system, capable of delivering at least one inches of water per week from June 1 through September 30 for at least the first three years following plant installation.
2. **Landscape Restoration Specialist:** A Professional Wetland Scientist, Landscape Architect, or similarly-qualified person, with at least three years' experience monitoring installation and performance of critical area mitigation sites in the Pacific Northwest.

3. **Large woody debris:** Native salvaged tree trunks that measure at least 20 feet long and exhibit a diameter of at least 12 inches at the narrow end.
4. **Wood chip mulch:** Wood chip mulch shall meet WSDOT Standard Specifications for Road, Bridge, and Municipal Construction (WSDOT Spec) for Wood Strand Mulch as defined 9-14.4(4). Arborist woodchips, sawdust, beauty bark and products labeled "hog fuel" are not acceptable. Many suppliers carry readily-available products that meet the above-cited WSDOT specification.
5. **Compost:** Compost shall meet WSDOT Spec 9-14.4(8).

### 8.3 Sequence of Work

1. Survey-locate and stake the boundaries of the:
  - a. Location of the clear and grub limit.
2. Install TESC fencing (e.g., high-visibility silt fence) at the limits of grading to protect the North Fork of Issaquah Creek from construction-impacted stormwater.
3. Grade the mitigation area per the grading plan.
4. During general site grading, stockpile five pieces of **LWD** that meet the specifications for **LWD** herein.
5. Soil restoration will occur in the area of the existing structure after grading and before planting of the site. Bucket tines or other means to rip will be used to de-compact soils to a depth of 18-inches; a rototiller is an acceptable alternate tool. Compost will be added to and incorporated into the soil matrix during decompaction.

**HOLD POINT – Landscape Restoration Specialist** shall inspect and sign off on soil decompaction prior to moving to Step #6.

6. Prepare soil subgrade in planting areas with four inches of **compost** in the enhancement planting areas.

**HOLD POINT – Landscape Restoration Specialist** shall inspect and sign off on soil amendment prior to moving to Step #7.

7. Spread a three-inch layer of **woodchip mulch** over the prepared soil.

**HOLD POINT - Landscape Restoration Specialist** shall inspect and sign off on mulch installation prior to moving to Step #8.

8. Install plants per the planting plan.

**HOLD POINT - Landscape Restoration Specialist** shall inspect and sign off on plant delivery prior to plant installation.

- a. Pull back woodchip mulch from the planting area,
- b. Install the plant and replace the mulch, ensuring the mulch does not touch the stem of the plant.
- c. Plants should be installed in the dormant season that extends from October 15, through March 15.

- d. If installed outside of this period, plants should be watered heavily immediately following installation, and provided supplemental watering regularly through the first dry season.

**HOLD POINT - Landscape Restoration Specialist** shall inspect and sign off on final plant installation and document findings in the as-built report.

9. Install and run an above-ground **irrigation system** for the first three years to ensure installed plants establish. Irrigation system should provide coverage to all planting areas in the buffer.

#### 8.4 Maintenance

The site will be maintained in accordance with the following guidelines for a period of five years following acceptance of the as-built conditions, or to the end of the modified mitigation and monitoring period.

1. Follow punch list items generated during site monitoring.
2. General weeding for all planted areas:
  - a. At least twice yearly, remove all competing weeds and weed roots by hand from the buffer mitigation area.
  - b. No line trimmers should be used inside of the mitigation area as they will damage native vegetation.
3. Replace any plant that dies within one year of as-built acceptance.
4. The applicant will ensure that water is provided for the entire planted area with a minimum of 1 inch of water provided per week from June 15 through September 30 for at least the first three years following installation through the operation of a temporary irrigation system. Less water is needed during March, April, May and October.

#### 8.5 Monitoring Plan

This monitoring plan is intended to ensure successful establishment of the mitigation plan. Lasting for a period of at least five years, the program is designed to track the success of the site over time against the performance standards outlined above, and provide a reporting mechanism to the City of Issaquah.

##### 8.5.1 As-built documentation

Following installation of the mitigation plan, the **Landscape Restoration Specialist** will make a site inspection visit and prepare an as-built document that confirms successful installation of the plan, records any major changes in plant species, quantities, planting areas and location of large woody debris. The as-built document will also record the locations of monitoring transects and photo points. The monitoring period begins once Issaquah has accepted the as-built report.

Monitoring transects shall be established during the as-built site visit. A minimum of 200 linear feet of monitoring transect (for line intercept vegetation assessment) shall be established using fixed, numbered posts. Transects can be broken into 50-foot segments to fit into the monitoring areas as needed.

##### 8.5.2 Spring site visit

The Landscape Restoration Specialist will make a site inspection visit in the spring, ahead of the growing season in order to generate a punch list for the maintenance crew and note any deficiencies with the site.

**8.5.3 Annual Fall Site Visit**

The primary monitoring visit and report will be done in late summer or fall in order to capture the growth of the preceding growing season. The primary monitoring visit will note the following items:

1. Estimate of Native Woody Cover
  - a. Using Line Intercept Method
2. Estimate of Noxious Weed Cover
  - a. Using Line Intercept Method
3. Count of Established Native Species per Stratum
4. Plant Count after Year 1
5. Photographs of the Site from Established Photo Points
6. Other Recommendations

**8.6 Performance and Maintenance Bond**

In accordance with IMC 18.10.490 (D), a maintenance and performance bond is required. This bond ensures the applicant remains responsible for the site until the end of the maintenance and monitoring period and successful establishment of the buffer mitigation site. Please see Appendix B for a copy of the bond quantity worksheet.

**8.7 Contingency Plan**

The following protocol will be following if deficiencies are noted at any point during site monitoring. This plan is to allow the site manager flexibility to respond to problems that may arise during the maintenance and monitoring period.

1. Providing additional supplement watering if drought conditions are present, or plants are showing signs of drought stress.
2. Replacing any unsuccessful species that exhibits high mortality with a demonstrably more successful species.
3. Adding plants to the site if cover performance standards are not being met.
4. Employing other adaptive management strategies as necessary to achieve success.

**8.8 Reporting**

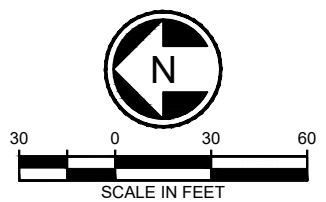
One annual report detailing the results of each monitoring site visit will be prepared and provided to the City of Issaquah within 30 days of the Fall site visit. The main annual monitoring report will contain an evaluation of the site using each of the stated performance standards.

---

## 9.0 REFERENCES

- City of Issaquah. (2019). *Issaquah Municipal Code: A Codification of the General Ordinances of the City of Issaquah, Washington*. Seattle : Code Publishing Company .
- Ecology, W. S. (2016). *Washington State Water Quality Atlas Mapper*, Version 1.0.0.0. Retrieved from Washington State Water Quality Atlas.
- Hruby, T. (2014). *Washington State Wetland Rating System for Western Washington-revised*. Washington State Department of Ecology Publication # 14-06-029.
- Kerwin, J. (2001). *Salmon and Steelhead Habitat Limiting Factors Report for the Cedar – Sammamish Basin (Water Resource Inventory Area 8)*. Olympia, WA: Washington Conservation Commission.
- U.S. Fish & Wildlife Services. (n.d.). *Information for Planning and Construction*. Retrieved from U.S. Fish & Wildlife Services: <https://ecos.fws.gov/ipac/location/index>
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- Washington Department of Fish and Wildlife. (n.d.). *SalmonScape*. Retrieved from Washington Department of Fish and Wildlife: <http://apps.wdfw.wa.gov/salmonscape/map.html>
- Washington State Department of Transportation. (2017, October). *I-90 North Fork Issaquah Creek Fish Passage*. Retrieved from Washington State Department of Transportation: <http://www.wsdot.wa.gov/Projects/I90/nforkissaquahcrkfishpassage/default.htm>
- Washington State Department of Transportation. (2018). *Standard Specification for Road, Bridge, and Municipal Construction*.

## **Appendix A - Stream Delineation Figure (Existing Conditions)**



Reference: Base file by Hansen Surveying & Consulting on 5-9-2019.

|       |           |     |     |     |                   | PREPARED FOR | BY |  | EVERGREEN FORD LINCOLN<br>230TH AVENUE SOUTHEAST<br>ISSAQUAH, WASHINGTON | Drawn By: J. Stewart   | <b>FIGURE</b><br><br><br><br><br><b>1</b> |
|-------|-----------|-----|-----|-----|-------------------|--------------|----|--|--|------------------------|---|
|       |           |     |     |     |                   |              |    |  |  | Reviewed By: M. Foster |   |
|       |           |     |     |     |                   |              |    |  |  | Approved By: M. Foster |   |
|       |           |     |     |     |                   |              |    |  |  | Date: May 2019         |   |
| Rev00 | 5-16-2019 | JS  | MF  | MF  | INITIAL SUBMITTAL |              |    |  |  | Project No.: 1959      |   |
| No.   | DATE      | DSN | CHK | APP | REVISION          |              |    |  | STREAM DELINEATION FIGURE  |                        |   |

## **Appendix B - Landscape Drawings**



May 16, 2019 12:01:35pm - User: alyse.wright  
N:\PROJECTS\1883 STROTAMP ARCHITECTS\1883.02 LANDSCAPE ARCHITECTURE EVERGREEN ISSAQAH FORD PHASE 01 -ASDP SUBMITTAL AND SUPPORT\CAD\1833.01 LA-1.DWG



SEC. 27, T24N., R6E., W.M.

SHEET INDEX

| SHEET   | DESCRIPTION                        |
|---------|------------------------------------|
| LA-1.1  | BUFFER REDUCTION & MITIGATION PLAN |
| LA-1.2  | TREE PRESERVATION PLAN             |
| LA-2.1  | PARKING LANDSCAPE AREA             |
| LA-3.1  | PLANTING KEY PLAN                  |
| LA-3.2  | PLANTING PLAN                      |
| LA-3.3  | PLANTING PLAN                      |
| LA-3.4  | PLANTING PLAN                      |
| LA-3.5  | PLANTING PLAN                      |
| LA-3.6  | PLANTING PLAN                      |
| LA-3.7  | PLANTING PLAN                      |
| LA-3.8  | ROOF PLANTING PLAN                 |
| LA-3.9  | PLANT SCHEDULE                     |
| LA-3.10 | PLANTING NOTES & DETAILS           |
| LA-4.1  | SCHEMATIC IRRIGATION PLAN          |
| LA-4.2  | IRRIGATION DETAILS                 |

SHEET INDEX NOTE:

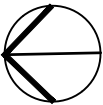
SHEETS WITH STRIKE THROUGH TEXT NOT NEEDED OR INCLUDED FOR THIS SUBMITTAL

MITIGATION SCHEDULE

|     |   |          |
|-----|---|----------|
| --- | CREEK BUFFER  |          |
|     | NEW ONSITE MITIGATION                               | 20,935   |
|     | EXISTING ONSITE MITIGATION TO REMAIN, PLANTED 2017  | 8,152    |
|     | EXISTING OFFSITE MITIGATION TO REMAIN, PLANTED 2017 | 30,421   |
|     | TOTAL MITIGATION                                    | 59,508   |
|     | BUFFER REDUCTION AREA                               | 8,659 SF |
|     | NEW IMPACT AREA                                     | 5,709 SF |

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT (800) 424-5555 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.



| REVISIONS                    | DATE      | BY |
|------------------------------|-----------|----|
| PRE-APPLICATION SUBMITTAL    | 2016-1214 | AW |
| ASDP SUBMITTAL               | 2019-0301 | AW |
| 30% REVIEW/BUDGET REVIEW "S" | 2019-0322 | AW |
| CRITICAL AREA STUDY          | 2019-0405 | AW |
| SDP RESUBMITTAL              | 2019-0416 | AW |
| RIVERS & STREAMS SUBMITTAL   | 2019-0515 | AW |



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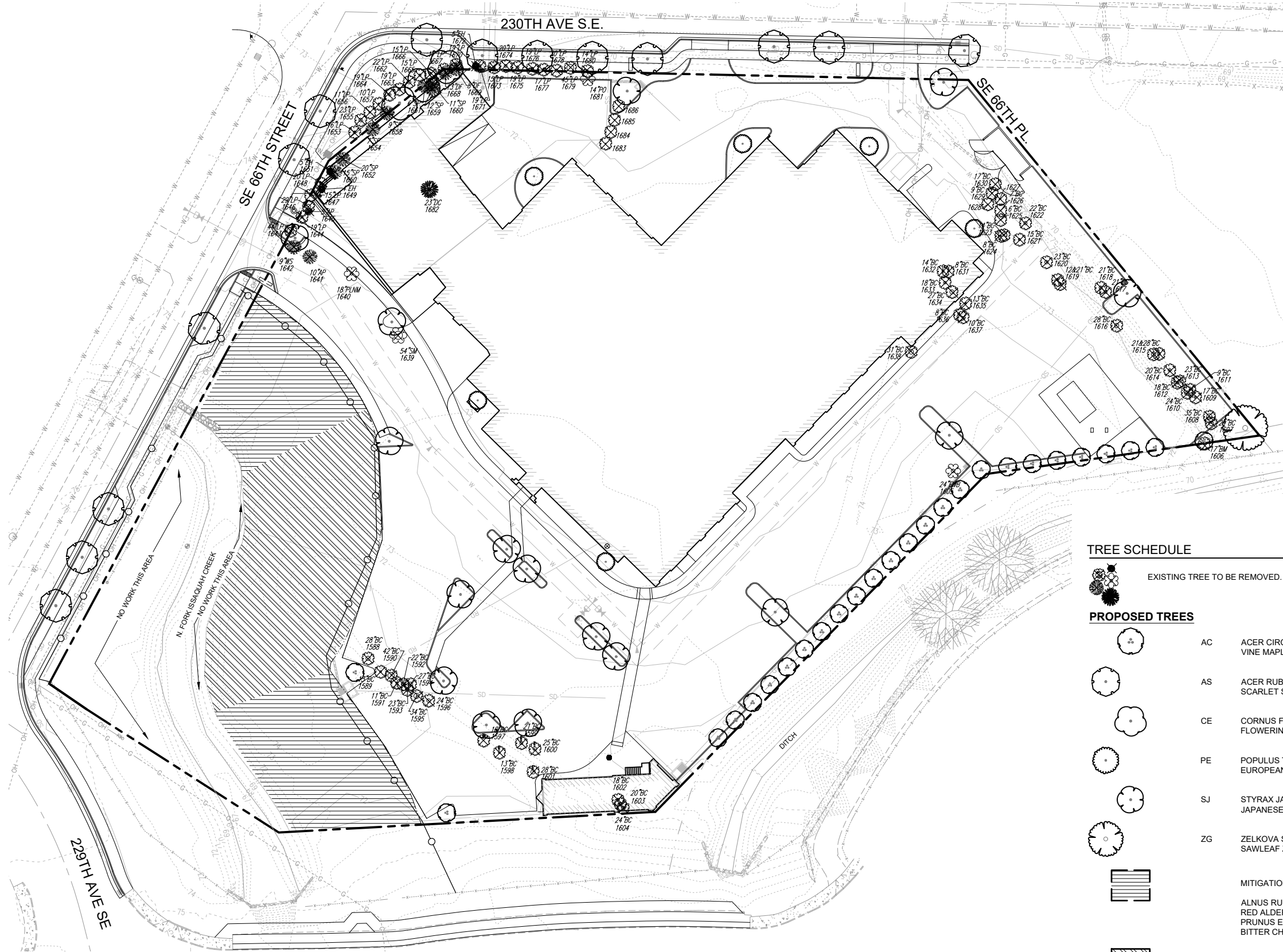
SHEET TITLE: BUFFER IMPACT & MITIGATION PLAN

PROJECT NAME:  
EVERGREEN FORD LINCOLN  
230TH AVE SE  
ISSAQAH, WASHINGTON



|                  |           |
|------------------|-----------|
| DESIGNER:        | AW        |
| DRAWN BY:        | AW        |
| APPROVED BY:     | M. GARFF  |
| DATE:            | MAY, 2019 |
| JOB NO:          | 1883.01   |
| DRAWING FILE NO: | LA-1.1    |
| DRAWING NO:      | LA-1.1    |
| SHEET NO:        | OF        |

SEC. 27, T24N., R6E., W.M



**Tree Protection Area, Entrance Prohibited**  
To report violations contact  
City Code Enforcement  
at (425) 837-3107

CONTINUOUS  
CHAINLINK FENCING  
POST @ MAX 10' OC  
INSTALL AT LOCATION  
S SHOWN ON PLANS

1. MINIMUM FOUR (4) FOOT HIGH TEMPORARY CHAINLINK FENCE SHALL BE PLACED AT THE CRITICAL ROOT ZONE OR DESIGNATED LIMIT OF DISTURBANCE OF THE TREE TO BE SAVED. THE FENCING SHALL COMPLETELY ENCIRCLE TREE(S). INSTALL FENCE POSTS USING PIER BLOCK ONLY. AVOID POST OR STAKES INTO MAJOR ROOTS. MODIFICATIONS TO FENCING MATERIAL AND LOCATION MUST BE APPROVED BY PLANNING OFFICIAL.
2. THE EVENT OF ROCKS OR LIMBS BEING CONSTRUCTED, FOR ROOTS OVER ONE (1) INCH DIAMETER, MUST BE COVERED DURING CONSTRUCTION WITH A CLEAN STRATUM TO REMOVE DAMAGED PORTION OF ROOT. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING AND COVERED WITH SOIL AS SOON AS POSSIBLE.
3. NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING. FENCING SHALL NOT BE MOVED OR REMOVED UNLESS APPROVED BY THE CITY PLANNING OFFICIAL. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY UNDER THE SUPERVISION OF THE ON-SITE SUPERVISOR AND WITHIN THE LIMITS OF THE CITY PLANNING OFFICIAL.
4. FENCING SIGNAGE AS DETAILED ABOVE MUST BE POSTED EVERY FIFTEEN (15) FEET ALONG THE FENCE.

### TREE PROTECTION FENCING DETAIL

**TREE PRESERVATION NOTES:**









1. SEE ARBORIST'S TREE PLAN.

## TREE SCHEDULE



EXISTING TREE TO BE REMOVED. SEE ARBORIST'S REPORT AND PLAN.

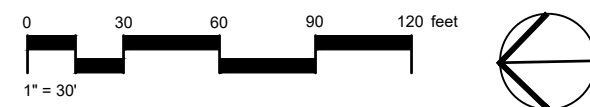
### PROPOSED TREES

|   |    |  |                  |           |           |
|---|----|--|------------------|-----------|-----------|
|  | AC | ACER CIRCINATUM<br>VINE MAPLE                              | 2" CAL           |           | 26        |
|  | AS | ACER RUBRUM 'SCARLET SENTINEL'<br>SCARLET SENTINEL MAPLE   | 2" CAL, 10' HT   |           | 14        |
|  | CE | CORNUS FLORIDA 'EDDIE'S WHITE WONDER'<br>FLOWERING DOGWOOD | 2" CAL, 10' HT   |           | 3         |
|  | PE | POPULUS TREMULA 'ERECTA'<br>EUROPEAN COLUMNAR ASPEN        | 2" CAL, 6' HT    |           | 6         |
|  | SJ | STYRAX JAPONICUS<br>JAPANESE SNOWBELL                      | 2" CAL, 6' HT    |           | 16        |
|  | ZG | ZELKOVA SERRATA 'GREEN VASE'<br>SAWLEAF ZELKOVA            | 2.5" CAL, 12' HT |           | 1         |
|  |    | MITIGATION: BUFFER TREES, DECIDUOUS                        |                  |           | 10,553 SF |
|   |    | ALNUS RUBRA<br>RED ALDER                                   | 5 GAL            | 120" o.c. | 55        |
|   |    | PRUNUS EMARGINATA<br>BITTER CHERRY                         | 5 GAL            | 120" o.c. | 55        |
|  |    | MITIGATION: BUFFER TREES, EVERGREEN                        |                  |           | 10,218 SF |
|   |    | THUJA PLICATA<br>WESTERN RED CEDAR                         | 5 GAL            | 120" o.c. | 107       |

283 REPLACEMENT TREES

CALL BEFORE YOU DIG

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|-----------------------------|-----------|----|
| PRE-APPLICATION SUBMITTAL   | 2018-1214 | AW |
| ASDP SUBMITTAL              | 2018-0301 | AW |
| 30% REVIEW BUDGET REVIEW 5" | 2019-0322 | AW |
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| SDP RESUBMITTAL             | 2019-0416 | AW |
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## TREE PRESERVATION PLAN

EVERGREEN FORD LINCOLN

230TH AVE SE  
ISSAQUAH, WASHINGTON

SHEET TITLE:

PROJECT NAME



DESIGNER:

AW

DRAWN BY:

AW

APPROVED BY  
M. GAY

DATE: \_\_\_\_\_

MAY 2

JOB NO:

1883.01

DRAWING FILE

DRAWING NO.

LA-1.2

OF



SEC. 27, T24N., R6E., W.M.

REFERENCE NOTES SCHEDULE

| SYMBOL | DESCRIPTION  | QTY    | DETAIL |
|--------|--|--------|--------|
| 1      | DECORATIVE PAVING PER LINCOLN PROTOTYPE  <br>MFR: DAL TILE   PRODUCT: EVER   SIZE: 24X24"  <br>COLOR: MOON EV01   FINISH: TEXTURED | 433 SF |        |
| 2      | SPLIT RAIL FENCE   | 562 LF |        |
| 3      | BOULDERS   NATIVE NATURAL STONE   1'-3'<br>DIAMETER, VARYING IN SIZE   PER LINCOLN<br>PROTOTYPE                                    |        |        |
| 4      | BIKE RACK   ANOVA   ITEM: LBR9PVCING, 7 LOOP RACK<br>  COLOR: TEXTURED CHARCOAL  |        |        |
| 5      | LARGE WOODY DEBRIS, 4 PIECES, MATERIAL: LARGE<br>DIAMETER BLACK COTTONWOOD DEBRIS CUT FROM<br>SITE.                                |        |        |

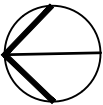
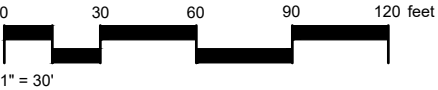
SEE FOLLOWING SHEETS FOR PLAN ENLARGEMENTS  
SEE SHEET LA3.9 FOR PLANTING SCHEDULE

BOUNDARY OF EXISTING WSDOT  
MITIGATION PLANTING TO REMAIN

BOUNDARY OF EXISTING WSDOT  
MITIGATION PLANTING TO REMAIN

CALL BEFORE YOU DIG

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48 HOURS PRIOR TO ANY EXCAVATION.



REVISIONS

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|------------|----|
| 2016-12-14 | AW |
| 2019-03-01 | AW |
| 2019-03-22 | AW |
| 2019-04-05 | AW |
| 2019-04-16 | AW |
| 2019-05-15 | AW |

|                              |
|------------------------------|
| PRE-APPLICATION SUBMITTAL    |
| ASDP SUBMITTAL               |
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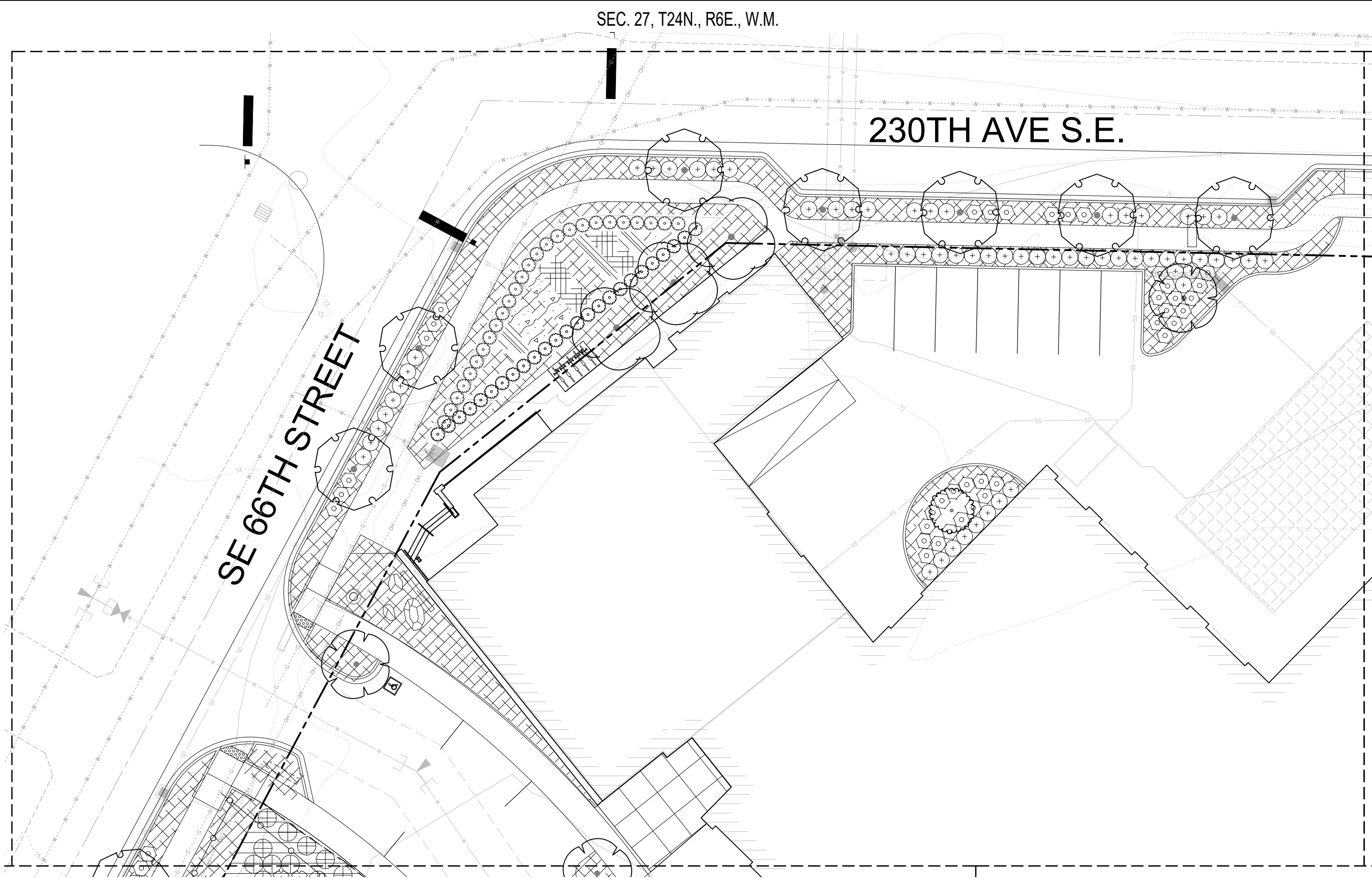
PLANTING KEY PLAN

EVERGREEN FORD LINCOLN  
230TH AVE SE  
ISSAQUAH, WASHINGTON

SEAL

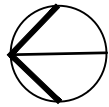
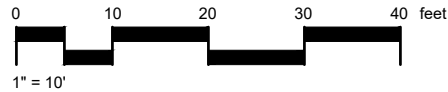
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AW  
DRAWN BY:  
AW  
APPROVED BY:  
M. GARFF  
DATE:  
MAY, 2019  
JOB NO:  
1883.01  
DRAWING FILE NO:  
DRAWING NO:  
LA-3.1  
SHEET NO:  
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May 16, 2019 12:02:44pm - User: dgraywright  
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|                              |  |           |    |
|------------------------------|--|-----------|----|
| REVISIONS                    |  | DATE      | BY |
| PRE-APPLICATION SUBMITTAL    |  | 2018-1214 | AW |
| ASDP SUBMITTAL               |  | 2019-0301 | AW |
| 30% REVIEW/BUDGET REVIEW "S" |  | 2019-0322 | AW |
| CRITICAL AREA STUDY          |  | 2019-0405 | AW |
| SDP RESUBMITTAL              |  | 2019-0416 | AW |
| RIVERS & STREAMS SUBMITTAL   |  | 2019-0515 | AW |

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|  |               |
|--|---------------|
| SHEET TITLE:   | PLANTING PLAN |
|  | PROJECT NAME: |
| EVERGREEN FORD LINCOLN<br>230TH AVE SE<br>ISSAQUAH, WASHINGTON |               |

|                  |           |
|------------------|-----------|
| DESIGNER:        | AW        |
| DRAWN BY:        | AW        |
| APPROVED BY:     | M. GARFF  |
| DATE:            | MAY, 2019 |
| JOB NO:          | 1883.01   |
| DRAWING FILE NO: | LA-3.2    |
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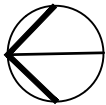
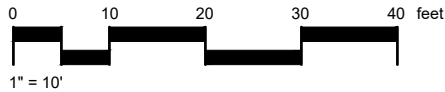
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SEC. 27, T24N., R6E., W.M.

SE 66TH PL.



SHEET TITLE:

SEAL:

DESIGNER:  
AW  
DRAWN BY:  
AW  
APPROVED BY:  
M. GARFF  
DATE:  
MAY, 2019  
JOB NO:  
1883.01  
DRAWING FILE NO:

DRAWING NO:  
LA-3.3  
SHEET NO:  
- OF -

PLANTING PLAN  
EVERGREEN FORD LINCOLN  
230TH AVE SE  
ISSAQUAH, WASHINGTON



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| 2016-1214 | AW |
| 2019-0301 | AW |
| 2019-0322 | AW |
| 2019-0405 | AW |
| 2019-0416 | AW |
| 2019-0515 | AW |

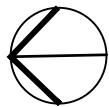
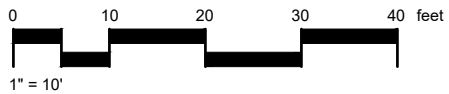
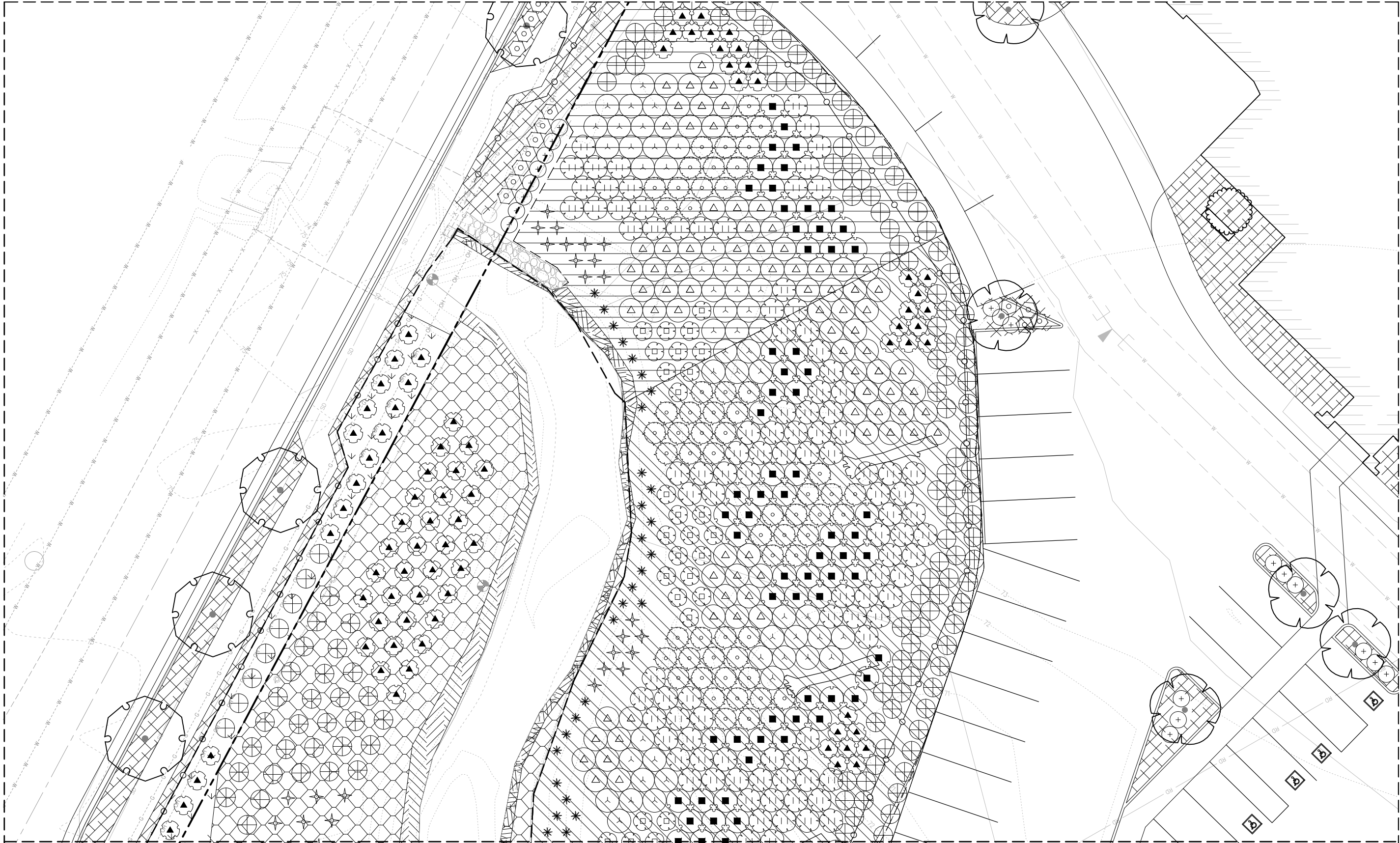
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ASDP SUBMITTAL  
30% REVIEW/BUDGET REVIEW "S"  
CRITICAL AREA STUDY  
SDP RESUBMITTAL  
RIVERS & STREAMS SUBMITTAL

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**PLANTING PLAN**

**EVERGREEN FORD LINCOLN**  
230TH AVE SE  
ISSAQUAH, WASHINGTON

SHEET TITLE:

SEAL:

DESIGNER:  
AW

DRAWN BY:  
AW

APPROVED BY:  
M. GARFF

DATE:  
MAY, 2019

JOB NO:  
1883.01

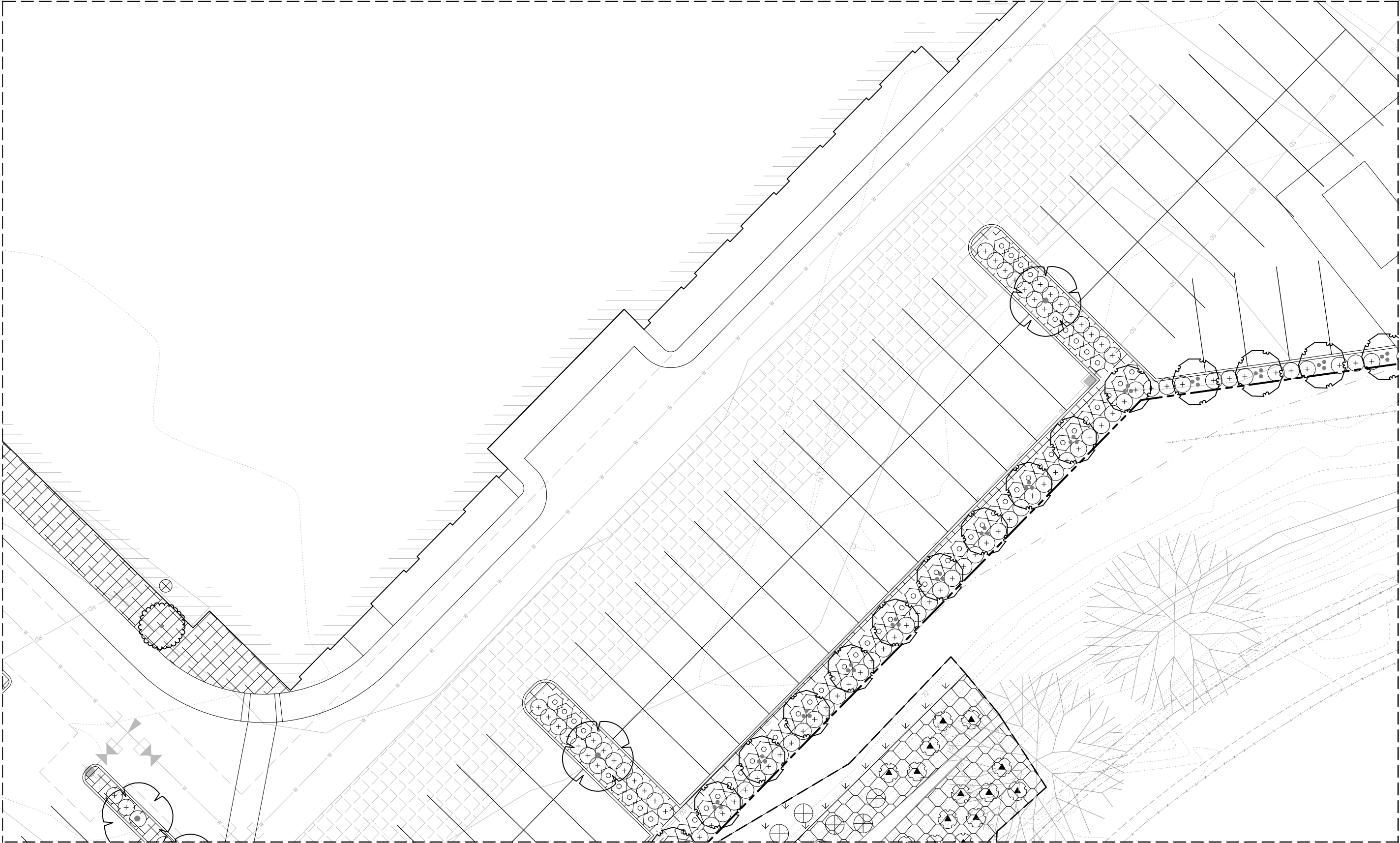
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LA-3.4

SHEET NO:  
OF

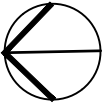
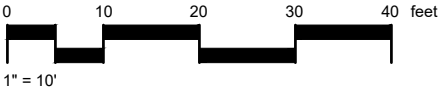


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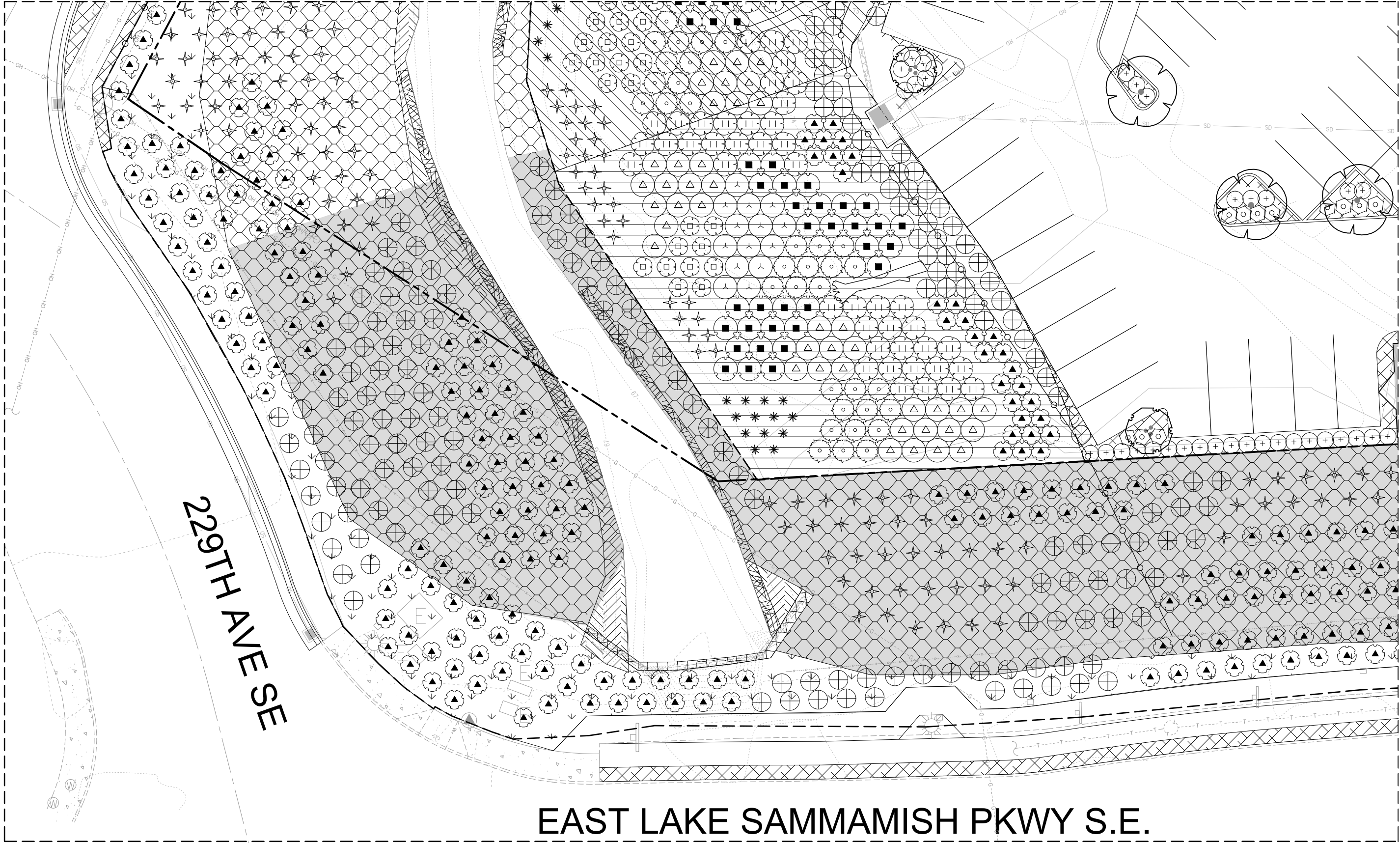
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| CRITICAL AREA STUDY          |  | 2019-04-05 | AW |
| SDP RESUBMITTAL              |  | 2019-04-16 | AW |
| RIVERS & STREAMS SUBMITTAL   |  | 2019-05-15 | AW |

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| EVERGREEN FORD LINCOLN<br>230TH AVE SE<br>ISSAQUAH, WASHINGTON |  |

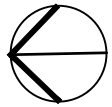
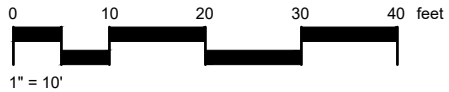
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M. GARFF  
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MAY, 2019  
JOB NO:  
1883.01  
DRAWING FILE NO:  
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SHEET NO:  
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| △         | PRE-APPLICATION SUBMITTAL    | 2016-12-14 | AW |
|           | ASDP SUBMITTAL               | 2019-03-01 | AW |
|           | 30% REVIEW/BUDGET REVIEW "S" | 2019-03-22 | AW |
|           | CRITICAL AREA STUDY          | 2019-04-05 | AW |
|           | SDP RESUBMITTAL              | 2019-04-16 | AW |
|           | RIVERS & STREAMS SUBMITTAL   | 2019-05-15 | AW |




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**PLANTING PLAN**

PROJECT NAME:  
EVERGREEN FORD LINCOLN  
230TH AVE SE  
ISSAQUAH, WASHINGTON

SHEET TITLE:  
PLANTING PLAN

SEAL:  


DESIGNER:  
AW

DRAWN BY:  
AW

APPROVED BY:  
M. GARFF

DATE:  
MAY, 2019

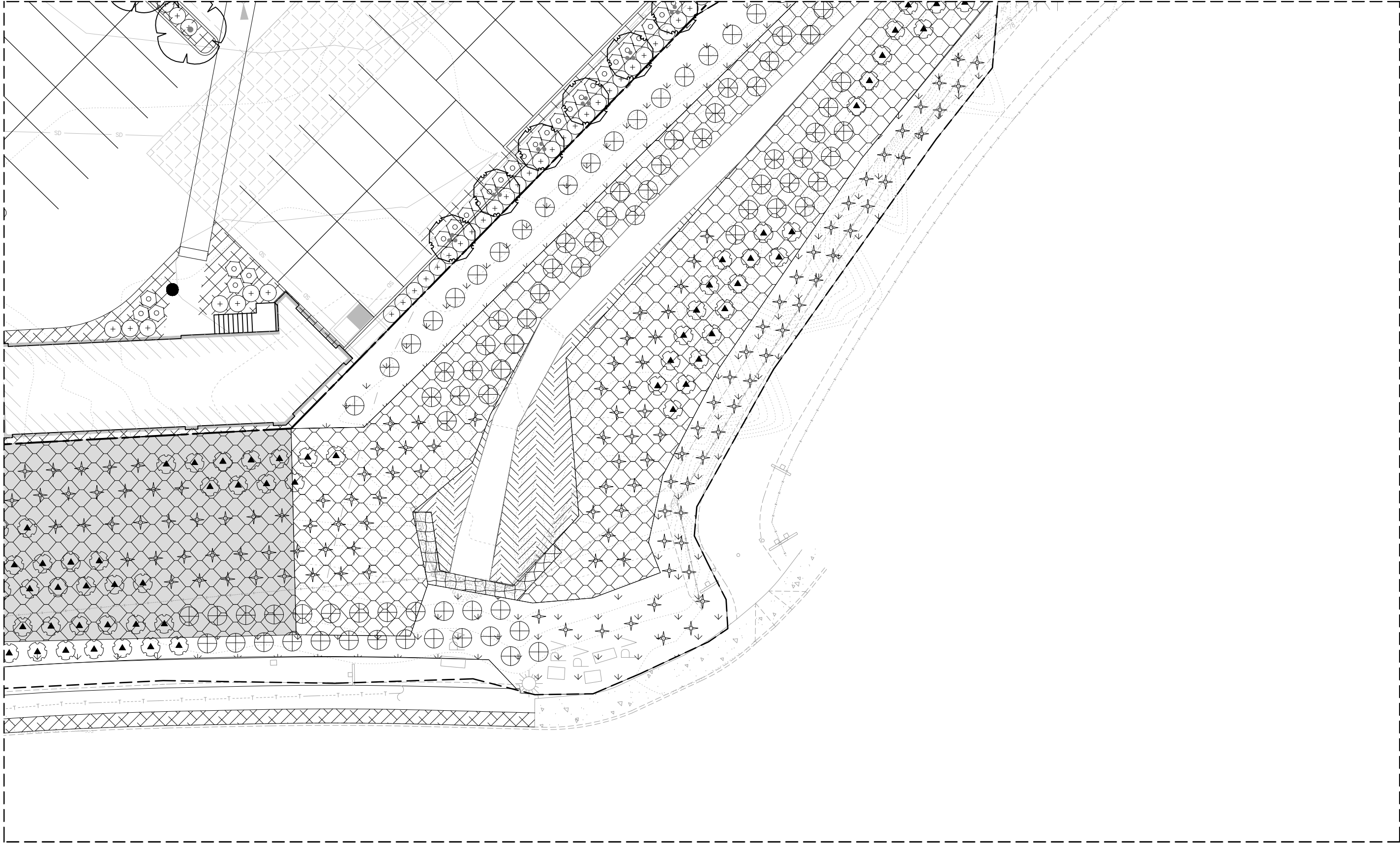
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SHEET NO:  
OF

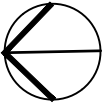
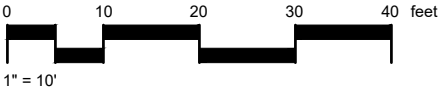


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| SHEET TITLE:  |  | PLANTING PLAN  |
| PROJECT NAME: |  | EVERGREEN FORD LINCOLN<br>230TH AVE SE<br>ISSAQUAH, WASHINGTON |

|                  |           |
|------------------|-----------|
| DESIGNER:        | AW        |
| DRAWN BY:        | AW        |
| APPROVED BY:     | M. GARFF  |
| DATE:            | MAY, 2019 |
| JOB NO:          | 1883.01   |
| DRAWING FILE NO: | LA-3.7    |
| DRAWING NO:      | LA-3.7    |
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MITIGATION PLANT SCHEDULE - RESTORATION AND ENHANCEMENT AREAS

TREES

MITIGATION: BUFFER TREES, DECIDUOUS

10,553 SF

100% NATIVE, MITIGATION BUFFER TREES, SPACING PER 18.10.790.4.3B, 10' O.C., 2-5 GAL.

---

ALNUS RUBRA

5 GAL

120" o.c.

55

RED ALDER

PRUNUS EMARGINATA

5 GAL

120" o.c.

55

BITTER CHERRY

MITIGATION: BUFFER TREES, EVERGREEN

10,218 SF

100% NATIVE, MITIGATION BUFFER TREES, SPACING PER 18.10.790.4.3B, 10' O.C., 2-5 GAL.

---

THUJA PLICATA

5 GAL

120" o.c.

107

WESTERN RED CEDAR

NATIVE GROUNDCOVER

CODE

BOTANICAL / COMMON NAME

SIZE

QTY

AF

ATHYRIUM FILIX-FEMINA  
COMMON LADY FERN

1 GAL

46

GS

GAULTHERIA SHALLON  
SALAL

2 GAL

367

Mr

MAHONIA REPENS  
CREEPING MAHONIA

2 GAL

423

Pm

POLYSTICHUM MUNITUM  
WESTERN SWORD FERN

5 GAL

281

NATIVE SHRUBS

CODE

BOTANICAL / COMMON NAME

SIZE

QTY

PC

PHYSOCARPUS CAPITATUS  
PACIFIC NINEBARK

2 GAL

101

RS2

RIBES SANGUINEUM  
RED FLOWERING CURRANT

2 GAL

64

RN

ROSA NUTKANA  
NOOTKA ROSE

2 GAL

146

RS3

RUBUS SPECTABILIS  
SALMONBERRY

5 GAL

50

SA

SYMPHORICARPOS ALBUS  
COMMON WHITE SNOWBERRY

2 GAL

119

VO

VACCINIUM OVATUM  
EVERGREEN HUCKLEBERRY

2 GAL

94

EXISTING WSDOT MITIGATION PLANT SCHEDULE

|  |   |
|--|---|
| PLANTS INDICATED IN THIS SECTION WERE PREVIOUSLY PLANTED BY WSDOT. THESE AREAS ARE TO BE ENHANCED WITH NATIVE GROUNDCOVER. SEE PLAN SHEETS AND NATIVE GROUNDCOVER SCHEDULE THIS SHEET. |   |
|  | MITIGATION: WSDOT MIX B EXISTING TO REMAIN<br><br>WESTERN RED CEDAR, 18" HT #2 CONT, (74)<br>OREGON ASH, 18" HT #2 CONT, (74)<br>BEAKED HAZELNUT, 12" HT #1 CONT, (202)<br>INDIAN PLUM, 18" HT #1 CONT, (202)<br>VINE MAPLE, 18" HT #1 CONT, (202)<br>SNOWBERRY, 18" HT #1 CONT, (178)<br>NOOTKA ROSE, 12" HT #1 CONT, (456)<br>SALMONBERRY, LIVE STAKE, (593)<br>- |
|  | MITIGATION: WSDOT MIX B EXISTING TO REMAIN, AS ABOVE. SOLID HATCH INDICATES "NO WESTERN RED CEDAR OR OREGON ASH IN THIS AREA" PER WSDOT   |
|  | MITIGATION: WSDOT MIX A EXISTING TO REMAIN<br><br>LADY FERN, #1 CONT, (99)<br>SITKA WILLOW, LIVE STAKE (66)<br>-  |
|  | MITIGATION: WSDOT MIX H EXISTING TO REMAIN<br><br>ORANGE HONEYSUCKLE, #1 CONT, (24)<br>-  |
|  | MITIGATION: WSDOT MIX E EXISTING TO REMAIN<br><br>EROSION CONTROL SEED AND MULCH<br>-   |
|  | MITIGATION: WSDOT FASCINES EXISTING TO REMAIN<br><br>SITKA WILLOW, 12" DIA LIVE FASCINE, (1,700 LF)<br>-  |

PLANT SCHEDULE - PARKING, ROOF, AND STREETScape ONLY

| TREES         |  | CODE  | BOTANICAL / COMMON NAME | CAL      | QTY       |
|---------------|--|---|-------------------------|----------|-----------|
|               | AC   | ACER CIRCINATUM<br>VINE MAPLE                                     | 2" CAL                  | 26       |           |
|               | AS   | ACER RUBRUM 'SCARLET SENTINEL'<br>SCARLET SENTINEL MAPLE          | 2" CAL, 10' HT          | 14       |           |
|               | CE   | CORNUS FLORIDA 'EDDIES WHITE WONDER'<br>FLOWERING DOGWOOD         | 2" CAL, 10' HT          | 3        |           |
|               | PE   | POPULUS TREMULA 'ERECTA'<br>EUROPEAN COLUMNAR ASPEN               | 2" CAL, 6' HT           | 6        |           |
|               | SJ   | STYRAX JAPONICUS<br>JAPANESE SNOWBELL                             | 2" CAL, 6' HT           | 16       |           |
| ZG            | ZELKOVA SERRATA 'GREEN VASE'<br>SAWLEAF ZELKOVA    | 2.5" CAL, 12' HT  | 1                       |          |           |
| SHRUBS        |  |   |                         |          |           |
|               | CODE   | BOTANICAL / COMMON NAME   | SIZE                    | QTY      |           |
|               |  | EVERGREEN SHRUBS  |                         | 403      |           |
|               |  | GAULTHERIA SHALLON<br>SALAL                                       | 2 GAL                   | 81       |           |
|               |  | ILEX CRENATA 'CONVEXA'<br>CONVEX-LEAVED JAPANESE HOLLY            | 5 GAL                   | 81       |           |
|               |  | MAHONIA NERVOSA<br>LOW OREGON GRAPE                               | 2 GAL                   | 81       |           |
|               |  | RHAPHIOLEPIS X DELACOURII 'SNOWCAP'<br>SNOWCAP INDIAN HAWTHORN    | 5 GAL                   | 81       |           |
|               |  | VIBURNUM DAVIDII<br>DAVID VIBURNUM                                | 5 GAL                   | 81       |           |
|               |  | DECIDUOUS SHRUBS  |                         | 225      |           |
|               |  | FOTHERGILLA GARDENII 'BLUE MIST'<br>BLUE MIST FOTHERGILLA         | 5 GAL                   | 56       |           |
|               |  | HYDRANGEA QUERCIFOLIA 'PEE WEE'<br>OAKLEAF HYDRANGEA              | 5 GAL                   | 56       |           |
|               |  | HYDRANGEA QUERCIFOLIA 'SNOWFLAKE'<br>SNOWFLAKE OAKLEAF HYDRANGEA  | 5 GAL                   | 56       |           |
|               |  | PHYSOCARPUS OPULIFOLIUS 'LITTLE DEVIL'<br>DWARF NINEBARK          | 2 GAL                   | 56       |           |
| SF            | SPIRAEA JAPONICA 'NEON FLASH'<br>NEON FLASH SPIREA | 2 GAL   | 75                      |          |           |
| GROUND COVERS |  |   |                         |          |           |
|               | CODE   | BOTANICAL / COMMON NAME   | CONT                    | SPACING  | QTY       |
|               |  | GROUNDCOVER & LOW SHRUBS  |                         |          | 10,466 SF |
|               |  | ARCTOSTAPHYLOS UVA-URSI 'WOODS COMPACT'<br>KINNIKINNICK           | 1 GAL                   | 18" o.c. | 822       |
|               |  | COTONEASTER DAMMERI 'CORAL BEAUTY'<br>BEARBERRY COTONEASTER       | 1 GAL                   | 18" o.c. | 774       |
|               |  | EPIMEDIUM X PERRALCHICUM  | 1 GAL                   | 18" o.c. | 822       |
|               |  | GERANIUM X CANTABRIGIENSE 'BIOKOVO'<br>BIOKOVO CRANESBILL         | 1 GAL                   | 18" o.c. | 774       |
|               |  | LIRIOPE MUSCARI 'EVERGREEN GIANT'<br>EVERGREEN GIANT BORDER GRASS | 1 GAL                   | 18" o.c. | 822       |
|               |  | MAHONIA REPENS<br>CREEPING MAHONIA                                | 1 GAL                   | 18" o.c. | 822       |
|               | CO   | CAREX OBNUPTA<br>SLOUGH SEDGE                                     | 1 GAL                   | 18" o.c. | 64        |
|               | CP   | CAREX TESTACEA 'PRAIRIE FIRE'<br>PRAIRIE FIRE SEDGE               | 1 GAL                   | 18" o.c. | 56        |
| JE2           | JUNCUS ENSIFOLIUS<br>SWORDLEAF RUSH                | 4"POT   | 24" o.c.                | 30       |           |
| JE            | JUNCUS PATENS 'ELK BLUE'<br>SPREADING RUSH         | 1 GAL   | 18" o.c.                | 48       |           |

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REVISIONS

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|-----------|----|----|----|----|----|----|----|
| 2016-1214 |    |    |    |    |    |    |    |
| 2019-0301 |    |    |    |    |    |    |    |
| 2019-0322 |    |    |    |    |    |    |    |
| 2019-0405 |    |    |    |    |    |    |    |
| 2019-0416 |    |    |    |    |    |    |    |
| 2019-0515 |    |    |    |    |    |    |    |

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PLANT SCHEDULE

EVERGREEN FORD LINCOLN  
230TH AVE SE  
ISSAQUAH, WASHINGTON

SEAL

DESIGNER:

AW

DRAWN BY:

AW

APPROVED BY:

M. GARFF

DATE:

MAY, 2019

JOB NO:

1883.01

DRAWING FILE NO:

DRAWING NO:

LA-3.9

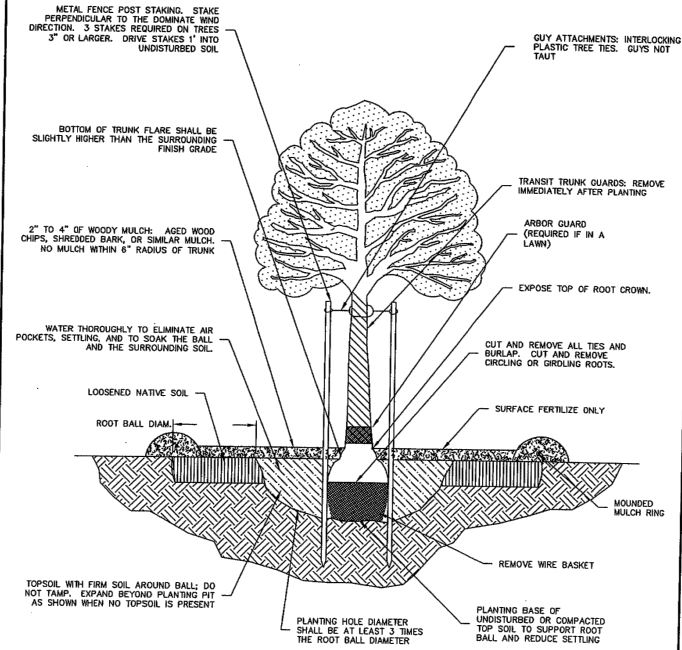
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May 16, 2019 12:04:06pm - User: dgraywright  
N:\PROJECTS\1883 STROTAMP ARCHITECTS\1883.02 LANDSCAPE ARCHITECTURE EVERGREEN ISSAQAH FORD\PHASE 01 -ASDP SUBMITTAL AND SUPPORT\CAD\1833.01 LA-3.1 - LA-3.7.DWG

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT (800) 424-5555 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.



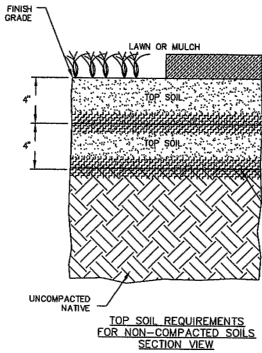
REVISION: MAY 16, 2007

NO SCALE



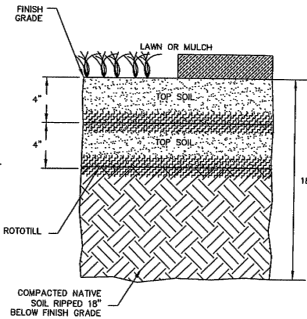
TREE PLANTING DETAIL

STANDARD  
DETAIL NO.  
L-01



TOP SOIL REQUIREMENTS  
FOR NON-COMPACTED SOILS

STEP 1. RIP 18" BELOW FINISH GRADE TO LOOSEN SOIL.  
STEP 2. LEAVE SUBGRADE AT 8" BELOW FINISH GRADE.  
STEP 3. ADD 4" OF TOPSOIL AND ROTOTILL INTO SUBGRADE.  
STEP 4. ADD 4" OF TOPSOIL AND ROTOTILL INTO PREVIOUS LAYER.



TOP SOIL REQUIREMENTS FOR  
COMPACTED SOILS  
SECTION VIEW

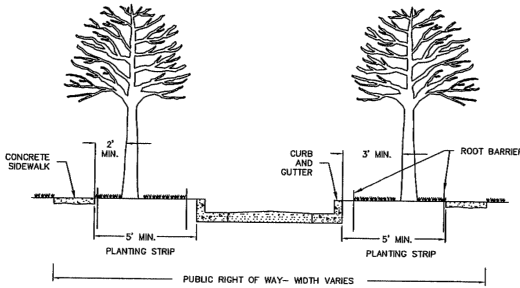
REVISION: MAY 16, 2007

NO SCALE



TOP SOIL REQUIREMENTS FOR  
COMPACTED AND NON-COMPACTED SOILS

STANDARD  
DETAIL NO.  
L-02



NOTES:

1. TREE SPACING IS DEPENDANT ON THE SIZE AND TYPE OF STREET TREE USED. SEE CITY CODE 18.12.180 FOR SPACING.
2. TREES SHALL NOT BE PLACED IN SIGHT DISTANCE TRIANGLES PER MOST CURRENT VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
3. COORDINATE WITH TRAFFIC CONTROL ENGINEER SO THAT TREES DO NOT OBSTRUCT SIGHT DISTANCE FOR TRAFFIC CONTROL SIGNS.
4. NITRINE, HARDY SHRUBS SHOULD BE USED IN PLANTER STRIPS.
5. PLANTING STRIP IRRIGATION SYSTEMS SHALL MEET IRRIGATION STANDARD AND INCORPORATE LATEST WATER CONSERVATION TECHNIQUES.
6. STREET TREES SHALL HAVE A MINIMUM OVERHEAD CLEARANCE OF SEVEN (7) FEET OVER PEDESTRIAN PATHWAYS AND FOURTEEN (14) FEET OVER STREETS AT MATURITY. STREET TREES SHALL BE CENTERED A MINIMUM OF THIRTY (30) FEET FROM INTERSECTIONS, TWENTY (20) FEET FROM STREET LIGHTS, THREE (3) FEET FROM CURBS AND TWO (2) FEET FROM SIDEWALKS OR AS OTHERWISE APPROVED BY THE CITY.
7. STREET TREES SHALL BE PLANTED IN A PLANTING STRIP WITH A MINIMUM OF FIVE (5) FEET BETWEEN THE SIDEWALK AND THE BACK OF THE CURB.
8. TREE PIT AREA SHALL BE A MINIMUM OF 24 SQUARE FEET.

REVISION: MAY 16, 2007

NO SCALE

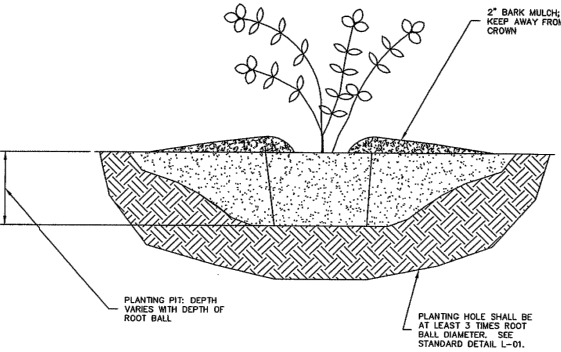


TYPICAL STREET TREE  
LOCATION REQUIREMENTS

STANDARD  
DETAIL NO.  
L-03

NOTES:

1. CUT & REMOVE ALL TWINE & PLASTIC. SCARIFY SIDES OF PLANTING HOLE & ROOT BALL.



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NO SCALE



TYPICAL SHRUB / GROUND  
COVER PLANTING

STANDARD  
DETAIL NO.  
L-04

PLANTING NOTES:

1. THE LANDSCAPE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES WITHIN THE LIMIT OF WORK AND IS RESPONSIBLE FOR ANY DAMAGE AS A RESULT OF THE LANDSCAPE CONSTRUCTION.
2. ALL TREE AND SHRUB LOCATIONS ARE TO BE STAKED OR LAID OUT ON SITE FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
  - 2.a. PROVIDE ROOT BARRIER FOR ALL TREES WITHIN 5' OF CURB OR PAVING
  - 2.b. TREE PITS SHALL BE 24 SF MIN
  - 2.c. STRUCTURAL SOILS AT LEAST 24" IN DEPTH WILL BE USED AS A SOIL BASE FOR TREES IN THE PLAZA
3. SUBSTITUTIONS: THE LANDSCAPE ARCHITECT SHALL APPROVE ANY SUBSTITUTION.
4. DO NOT PRUNE PLANTS UNLESS DIRECTED TO DO SO BY THE LANDSCAPE ARCHITECT.
5. CONTAINER STOCK IS PREFERRED FOR ALL PLANTS. IF CONTAINER STOCK IS NOT AVAILABLE FOR TREES, THEN ALL B&B PLANT MATERIAL SHALL HAVE ALL WIRE, TWINE, OR OTHER CONTAINMENT MATERIAL, EXCEPT FOR 100% HEMP BURLAP, REMOVED FROM THE TRUNK AND ROOT BALL OF THE PLANT PRIOR TO PLANTING. REMOVE THE TOP 2/3 OF THE HEMP BURLAP AFTER PLACING PLANT IN THE PIT.
6. PLANTING SOIL FOR LANDSCAPE PLANTING AREAS (DOES NOT INCLUDE RAINGARDENS, MITIGATION AREAS):
  - 6.a. DO NOT STORE BULK MATERIALS NEAR STRUCTURES, OVER EXISTING PLANTING, OVER UTILITIES, WALKWAYS AND PAVEMENTS.
  - 6.b. PROVIDE EROSION CONTROL MEASURES TO PREVENT DISPLACEMENT OF BULK MATERIALS, DISCHARGE INTO WATERWAYS OR SEWERS, AND AIRBORNE DUST.
  - 6.c. PREPARING PLANTING AREAS, AND SPREADING SOIL SHALL BE COMPLETED BY THE LANDSCAPE CONTRACTOR AND SUPERVISED BY THE GENERAL CONTRACTOR SO THAT GRADES ARE MET AS NOTED ON THE GRADING PLANS.
  - 6.d. ALL IMPORTED PLANTING AREA SOIL SHALL BE 2-WAY (60% SAND, 40% COMPOST) TOPSOIL FROM AN APPROVED SOURCE. PROVIDE A 1-QUART SAMPLE FOR APPROVAL PRIOR TO IMPORTING ANY SOIL. TOPSOIL NOT MEETING INDUSTRY STANDARDS FOR COMPOSITION AND NUTRIENTS SHALL BE REJECTED.
  - 6.e. QUANTITY OF IMPORTED SOIL SHALL BE EQUAL TO A MINIMUM OF SIX (6) INCHES DEPTH IN ALL LANDSCAPE BEDS. THE SOIL INSTALLATION PROCESS OUTLINED BELOW SHALL COMBINE THIS QUANTITY OF IMPORTED SOIL WITH SUBSOIL TO RESULT IN AN EIGHT (8) INCH DEPTH OF PLANTING SOIL.
  - 6.f. SOIL INSTALLATION: APPLY TWO (2) INCHES OF APPROVED IMPORTED SOIL OVER PREPARED SUBGRADE. TILL IMPORTED SOIL INTO TOP TWO (2) INCHES OF SUBSOIL TO CREATE AMENDED SOIL. APPLY AN ADDITIONAL FOUR (4) INCHES OF IMPORTED SOIL OVER AMENDED SOIL, TO CREATE AN EIGHT (8) INCH LAYER OF PLANTING SOIL. ROLL AND RAKE SMOOTH. ENSURE NO ROCKS OR OTHER DEBRIS EXCEEDING 3 INCHES IN DIAMETER REMAIN.
  - 6.g. IF PREPARED SOIL OR PREPARED SUBGRADE IS RE-COMPACTED, RESTORE AS DIRECTED BY THE LANDSCAPE ARCHITECT.
7. PLANTING SOIL FOR RAINGARDENS – SEE CIVIL. DO NOT MULCH RAINGARDENS
8. PLANTING SOIL FOR MITIGATION AREAS OUTSIDE OF RAINGARDENS AND PREPARED LANDSCAPE BEDS:
  - 8.a. DO NOT STORE BULK MATERIALS NEAR STRUCTURES, OVER EXISTING PLANTING, OVER UTILITIES, WALKWAYS AND PAVEMENTS.
  - 8.b. PROVIDE EROSION CONTROL MEASURES TO PREVENT DISPLACEMENT OF BULK MATERIALS, DISCHARGE INTO WATERWAYS OR SEWERS, AND AIRBORNE DUST.
  - 8.c. PREPARE MITIGATION AREAS BY REMOVING ALL INVASIVE WEEDS INCLUDING ROOTS.
  - 8.d. ALL IMPORTED PLANTING AREA SOIL SHALL BE 100%, NON-YARD-WASTE SOURCED COMPOST FROM AN APPROVED SUPPLIER. PROVIDE A 1-QUART SAMPLE FOR APPROVAL PRIOR TO IMPORTING ANY SOIL. COMPOST NOT MEETING INDUSTRY STANDARDS FOR COMPOSITION AND NUTRIENTS SHALL BE REJECTED.
  - 8.e. QUANTITY OF IMPORTED SOIL SHALL BE EQUAL TO A MINIMUM OF SIX (2) INCHES DEPTH IN ALL LANDSCAPE BEDS. THE SOIL INSTALLATION PROCESS OUTLINED BELOW SHALL COMBINE THIS QUANTITY OF IMPORTED SOIL WITH SUBSOIL TO RESULT IN AN EIGHT (4) INCH DEPTH OF PLANTING SOIL.
  - 8.f. SOIL INSTALLATION: APPLY TWO (2) INCHES OF APPROVED IMPORTED SOIL OVER PREPARED SUBGRADE. TILL IMPORTED SOIL INTO TOP TWO (2) INCHES OF SUBSOIL TO CREATE AMENDED SOIL. ROLL AND RAKE SMOOTH. ENSURE NO ROCKS OR OTHER DEBRIS EXCEEDING 3 INCHES IN DIAMETER REMAIN.
9. MULCH ENTIRE LANDSCAPE AREA TO A DEPTH OF 3 INCHES WITH DARK FINE MULCH (DOES NOT INCLUDE RAINGARDENS OR MITIGATION AREAS). PROVIDE A 1-QUART SAMPLE FOR APPROVAL PRIOR TO IMPORTING ANY MULCH.
10. MULCH SHALL NOT BE ABOVE OR MORE THAN 1/2 INCH BELOW ADJOINING SURFACE. MULCH SHALL BE HELD BACK 2-3 INCHES FROM THE STEMS AND TRUNKS OF PLANTS.
11. DURING PLANTING OPERATIONS, KEEP ADJACENT PAVING AREAS CLEAN AND PROTECTED FROM DAMAGE. WORK AREA SHALL BE KEPT CLEAN AND ORDERLY.
12. DO NOT REMOVE NURSERY TAGS, STAKES, AND TIES UNTIL DIRECTED TO DO SO BY THE LANDSCAPE ARCHITECT.
13. WARRANTY: INSTALLER AGREES TO WARRANTY PLANTING THAT FAILS IN MATERIALS, WORKMANSHIP OR GROWTH WITHIN A WARRANTY PERIOD OF 12 MONTHS FROM THE DATE OF PLANTING COMPLETION.
14. PLANT SYMBOLS SHALL DICTATE PLANT COUNT.
15. ALL LANDSCAPING SHALL BE PLANTED AND MAINTAINED IN A LIVING CONDITION BY THE CONTRACTOR UNTIL FINAL OWNER ACCEPTANC

| BY | DATE      | REVISIONS                      | PROJECT NAME   | SHEET TITLE    | SEAL  |
|----|-----------|--------------------------------|--|----------------|---|
| AW | 2018-1214 | PRE-APPLICATION SUBMITTAL      | SCJ ALLIANCE<br>CONSULTING SERVICES<br>8730 TALLON LANE NE, SUITE 200, LACEY, WA 98516<br>P: 360.352.1465 F: 360.352.1509<br>SCJALLIANCE.COM | PLANTING NOTES | MARKS GARDEN<br>LANDSCAPE ARCHITECT<br>NO. 1883.01<br>EXP. 01/01/2021 |
| AW | 2019-0301 | ASDP SUBMITTAL                 |  |                |   |
| AW | 2019-0322 | 30% REVIEW / BUDGET REVIEW "S" |  |                |   |
| AW | 2019-0405 | CRITICAL AREA STUDY            |  |                |   |
| AW | 2019-0416 | SDP RESUBMITTAL                |  |                |   |
| AW | 2019-0515 | RIVERS & STREAMS SUBMITTAL     |  |                |   |

## **Appendix C - King County Mitigation Bond Quantity Worksheet**

**King County**

Department of Permitting and  
Environmental Review  
35030 SE Douglas Str, Suite 210  
Snoqualmie, WA 98065-9266  
206-296-6600 TTY Relay: 711

## Critical Areas Mitigation Bond Quantity Worksheet

C24 09/09/2015  
Is-wks-sensareaBQ.xls  
Is-wks-sensareaBQ.pdf

**Project Name:** Issaquah Ford Lincoln**Date:** 8-Apr-19 **Prepared by:** Shannon Ingebright (OSG)**Project Number:****Project Description:** Buffer Mitigation Plan related to new dealership project.**Location:** City of Issaquah**Applicant:** Issaquah Lincoln Ford **Phone:**

### PLANT MATERIALS (includes labor cost for plant installation)

| Type                                     | Unit Price | Unit | Quantity | Description                  | Cost                |
|--|------------|------|----------|------------------------------|---------------------|
| PLANTS: Potted, 4" diameter, medium      | \$5.00     | Each |          |                              | \$ -                |
| PLANTS: Container, 1 gallon, medium soil | \$11.50    | Each | 209.00   | Shrubs; 2 species            | \$ 2,403.50         |
| PLANTS: Container, 2 gallon, medium soil | \$20.00    | Each | 818.00   | Trees and shrubs; 10 species | \$ 16,360.00        |
| PLANTS: Container, 5 gallon, medium soil | \$36.00    | Each |          |                              | \$ -                |
| PLANTS: Seeding, by hand                 | \$0.50     | SY   |          |                              | \$ -                |
| PLANTS: Slips (willow, red-osier)        | \$2.00     | Each |          |                              | \$ -                |
| PLANTS: Stakes (willow)                  | \$2.00     | Each |          |                              | \$ -                |
| PLANTS: Stakes (willow)                  | \$2.00     | Each |          |                              | \$ -                |
| PLANTS: Flats/plugs                      | \$2.00     | Each |          |                              | \$ -                |
| <b>TOTAL</b>                             |            |      |          |                              | <b>\$ 18,763.50</b> |

### INSTALLATION COSTS ( LABOR, EQUIPMENT, & OVERHEAD)

| Type   | Unit Price | Unit | Quantity | Description | Cost                |
|--|------------|------|----------|-------------|---------------------|
| Compost, vegetable, delivered and spread                   | \$37.88    | CY   | 234.00   |             | \$ 8,863.92         |
| Decompacting till/hardpan, medium, to 6" depth             | \$1.57     | CY   |          |             | \$ -                |
| Decompacting till/hardpan, medium, to 12" depth            | \$1.57     | CY   |          |             | \$ -                |
| Hydroseeding   | \$0.51     | SY   |          |             | \$ -                |
| Labor, general (landscaping other than plant installation) | \$40.00    | HR   |          |             | \$ -                |
| Labor, general (construction)                              | \$40.00    | HR   |          |             | \$ -                |
| Labor: Consultant, supervising                             | \$55.00    | HR   |          |             | \$ -                |
| Labor: Consultant, on-site re-design                       | \$95.00    | HR   |          |             | \$ -                |
| Rental of decompacting machinery & operator                | \$70.00    | HR   |          |             | \$ -                |
| Sand, coarse builder's, delivered and spread               | \$42.00    | CY   |          |             | \$ -                |
| Staking material (set per tree)                            | \$7.00     | Each |          |             | \$ -                |
| Surveying, line & grade                                    | \$250.00   | HR   |          |             | \$ -                |
| Surveying, topographical                                   | \$250.00   | HR   |          |             | \$ -                |
| Watering, 1" of water, 50' soaker hose                     | \$3.62     | MSF  |          |             | \$ -                |
| Irrigation - temporary                                     | \$3,000.00 | Acre | 0.45     |             | \$ 1,350.00         |
| Irrigation - buried  | \$4,500.00 | Acre |          |             | \$ -                |
| Tilling topsoil, disk harrow, 20hp tractor, 4"-6" deep     | \$1.02     | SY   |          |             | \$ -                |
| <b>TOTAL</b>   |            |      |          |             | <b>\$ 10,213.92</b> |

### HABITAT STRUCTURES\*

| ITEMS  | Unit Cost  | Unit | Quantity | Description           | Cost        |
|--|------------|------|----------|-----------------------|-------------|
| Fascines (willow)                                    | \$ 2.00    | Each |          |                       | \$ -        |
| Logs, (cedar), w/ root wads, 16"-24" diam., 30' long | \$1,000.00 | Each |          |                       | \$ -        |
| Logs (cedar) w/o root wads, 16"-24" diam., 30'       | \$400.00   | Each |          |                       | \$ -        |
| Logs, w/o root wads, 16"-24" diam., 30' long         | \$245.00   | Each |          | sourced from the site | \$ -        |
| Logs w/ root wads, 16"-24" diam., 30' long           | \$460.00   | Each |          |                       | \$ -        |
| Rocks, one-man                                       | \$60.00    | Each |          |                       | \$ -        |
| Rocks, two-man                                       | \$120.00   | Each |          |                       | \$ -        |
| Root wads  | \$163.00   | Each |          |                       | \$ -        |
| Spawning gravel, type A                              | \$22.00    | CY   |          |                       | \$ -        |
| Weir - log   | \$1,500.00 | Each |          |                       | \$ -        |
| Weir - adjustable                                    | \$2,000.00 | Each |          |                       | \$ -        |
| Woody debris, large                                  | \$163.00   | Each |          |                       | \$ -        |
| Snags - anchored                                     | \$400.00   | Each |          |                       | \$ -        |
| Snags - on site                                      | \$50.00    | Each |          |                       | \$ -        |
| Snags - imported                                     | \$800.00   | Each |          |                       | \$ -        |
| <b>TOTAL</b>   |            |      |          |                       | <b>\$ -</b> |

\* All costs include delivery and installation

### EROSION CONTROL

| ITEMS                                   | Unit Cost | Unit | Quantity | Description | Cost        |
|---|-----------|------|----------|-------------|-------------|
| Backfill and Compaction-embankment      | \$ 4.89   | CY   |          |             | \$ -        |
| Crushed surfacing, 1 1/4" minus         | \$30.00   | CY   |          |             | \$ -        |
| Ditching                                | \$7.03    | CY   |          |             | \$ -        |
| Excavation, bulk                        | \$4.00    | CY   |          |             | \$ -        |
| Fence, silt                             | \$1.60    | LF   |          |             | \$ -        |
| Jute Mesh                               | \$1.26    | SY   | 0.00     |             | \$ -        |
| Mulch, by hand, straw, 2" deep          | \$1.27    | SY   |          |             | \$ -        |
| Mulch, by hand, wood chips, 2" deep     | \$3.25    | SY   | 2174.00  |             | \$ 7,065.50 |
| Mulch, by machine, straw, 1" deep       | \$0.32    | SY   |          |             | \$ -        |
| Piping, temporary, CPP, 6"              | \$9.30    | LF   |          |             | \$ -        |
| Piping, temporary, CPP, 8"              | \$14.00   | LF   |          |             | \$ -        |
| Piping, temporary, CPP, 12"             | \$18.00   | LF   |          |             | \$ -        |
| Plastic covering, 6mm thick, sandbagged | \$2.00    | SY   |          |             | \$ -        |
| Rip Rap, machine placed, slopes         | \$33.98   | CY   |          |             | \$ -        |

|   |                            |      |      |   |              |                     |
|---|----------------------------|------|------|---|--------------|---------------------|
| Rock Constr. Entrance 100'x15'x1'   | \$3,000.00                 | Each |      |   | \$           | -                   |
| Rock Constr. Entrance 50'x15'x1'  | \$1,500.00                 | Each |      |   | \$           | -                   |
| Sediment pond riser assembly  | \$1,695.11                 | Each |      |   | \$           | -                   |
| Sediment trap, 5' high berm   | \$15.57                    | LF   |      |   | \$           | -                   |
| Sediment trap, 5' high berm w/spillway incl. riprap   | \$59.60                    | LF   |      |   | \$           | -                   |
| Sodding, 1" deep, level ground  | \$5.24                     | SY   |      |   | \$           | -                   |
| Sodding, 1" deep, sloped ground   | \$6.48                     | SY   |      |   | \$           | -                   |
| Straw bales, place and remove   | \$600.00                   | TON  |      |   | \$           | -                   |
| Hauling and disposal  | \$20.00                    | CY   |      |   | \$           | -                   |
| Topsoil, delivered and spread   | \$35.73                    | CY   | 0.00 |   | \$           | -                   |
|   |                            |      |      |   | <b>TOTAL</b> | <b>\$ 7,065.50</b>  |
| <b>GENERAL ITEMS</b>  |                            |      |      |   |              |                     |
| ITEMS   | Unit Cost                  | Unit |      |   |              | Cost                |
| Fencing, chain link, 6' high  | \$18.89                    | LF   |      |   | \$           | -                   |
| Fencing, chain link, corner posts   | \$111.17                   | Each |      |   | \$           | -                   |
| Fencing, chain link, gate   | \$277.63                   | Each |      |   | \$           | -                   |
| Fencing, split rail, 3' high (2-rail)   | \$10.54                    | LF   |      |   | \$           | -                   |
| Fencing, temporary (NGPE)   | \$1.20                     | LF   |      |   | \$           | -                   |
| Signs, sensitive area boundary (inc. backing, post, install)  | \$28.50                    | Each |      |   | \$           | -                   |
|   |                            |      |      |   | <b>TOTAL</b> | <b>\$ -</b>         |
| <b>OTHER</b>  |                            |      |      | (Construction Cost Subtotal)                            | \$           | <b>36,042.92</b>    |
| ITEMS   | Percentage of Construction | Unit |      |   |              | Cost                |
| Mobilization  | 10%                        | 1    |      |   | \$           | 3,604.29            |
| Contingency   | 30%                        | 1    |      |   | \$           | 10,812.88           |
|   |                            |      |      |   | <b>TOTAL</b> | <b>\$ 14,417.17</b> |
| <b>MAINTENANCE AND MONITORING</b><br><small>NOTE: Projects with multiple permit requirements may be required to have longer monitoring and maintenance terms. This will be evaluated on a case-by-case basis for development applications. Monitoring and maintenance ranges may be assessed anywhere from 5 to 10 years.</small> |                            |      |      |   |              |                     |
| Maintenance, annual (by owner or consultant)  |                            |      |      |   |              |                     |
| Less than 1,000 sq.ft. and buffer mitigation only   | \$ 1.08                    | SF   |      | (3 X SF total for 3 annual events; Includes monitoring) | \$           | -                   |
| Less than 1,000 sq.ft. with wetland or aquatic area mitigation  | \$ 1.35                    | SF   |      | (3 X SF total for 3 annual events; Includes monitoring) | \$           | -                   |
| Larger than 1,000 sq. ft. but less than 5,000 sq.ft. of buffer mitigation   | \$ 180.00                  | EACH |      | (4hr @\$45/hr)  | \$           | -                   |
| Larger than 1,000 sq. ft. but less than 5,000 sq.ft. of wetland or aquatic area mitigation  | \$ 270.00                  | EACH |      | (6hr @\$45/hr)  | \$           | -                   |
| Larger than 5,000 sq.ft. but < 1 acre -buffer mitigation only   | \$ 360.00                  | EACH | 5.00 | (8 hrs @ 45/hr)   | \$           | 1,800.00            |
| Larger than 5,000 sq.ft. but < 1 acre with wetland or aquatic area mitigation   | \$ 450.00                  | EACH |      | (10 hrs @ \$45/hr)                                      | \$           | -                   |
| Larger than 1 acre but < 5 acres - buffer and / or wetland or aquatic area mitigation   | \$ 1,600.00                | DAY  |      | (WEC crew)  | \$           | -                   |
| Larger than 5 acres - buffer and / or wetland or aquatic area mitigation  | \$ 2,000.00                | DAY  |      | (1.25 X WEC crew)                                       | \$           | -                   |
| Monitoring, annual (by owner or consultant)   |                            |      |      |   |              |                     |
| Larger than 1,000 sq.ft. but less than 5,000 wetland or buffer mitigation   | \$ 720.00                  | EACH |      | (8 hrs @ 90/hr)   | \$           | -                   |
| Larger than 5,000 sq.ft. but < 1 acre with wetland or aquatic area impacts  | \$ 900.00                  | EACH | 5.00 | (10 hrs @ \$90/hr)                                      | \$           | 4,500.00            |
| Larger than 1 acre but < 5 acres - buffer and / or wetland or aquatic area impacts  | \$ 1,440.00                | DAY  |      | (16 hrs @ \$90/hr)                                      | \$           | -                   |
| Larger than 5 acres - buffer and / or wetland or aquatic area impacts   | \$ 2,160.00                | DAY  |      | (24 hrs @ \$90/hr)                                      | \$           | -                   |
|   |                            |      |      |   | <b>TOTAL</b> | <b>\$ 6,300.00</b>  |
|   |                            |      |      |   | <b>Total</b> | <b>\$56,760.09</b>  |